



BUSINESS TECHNOLOGY LEADERSHIP

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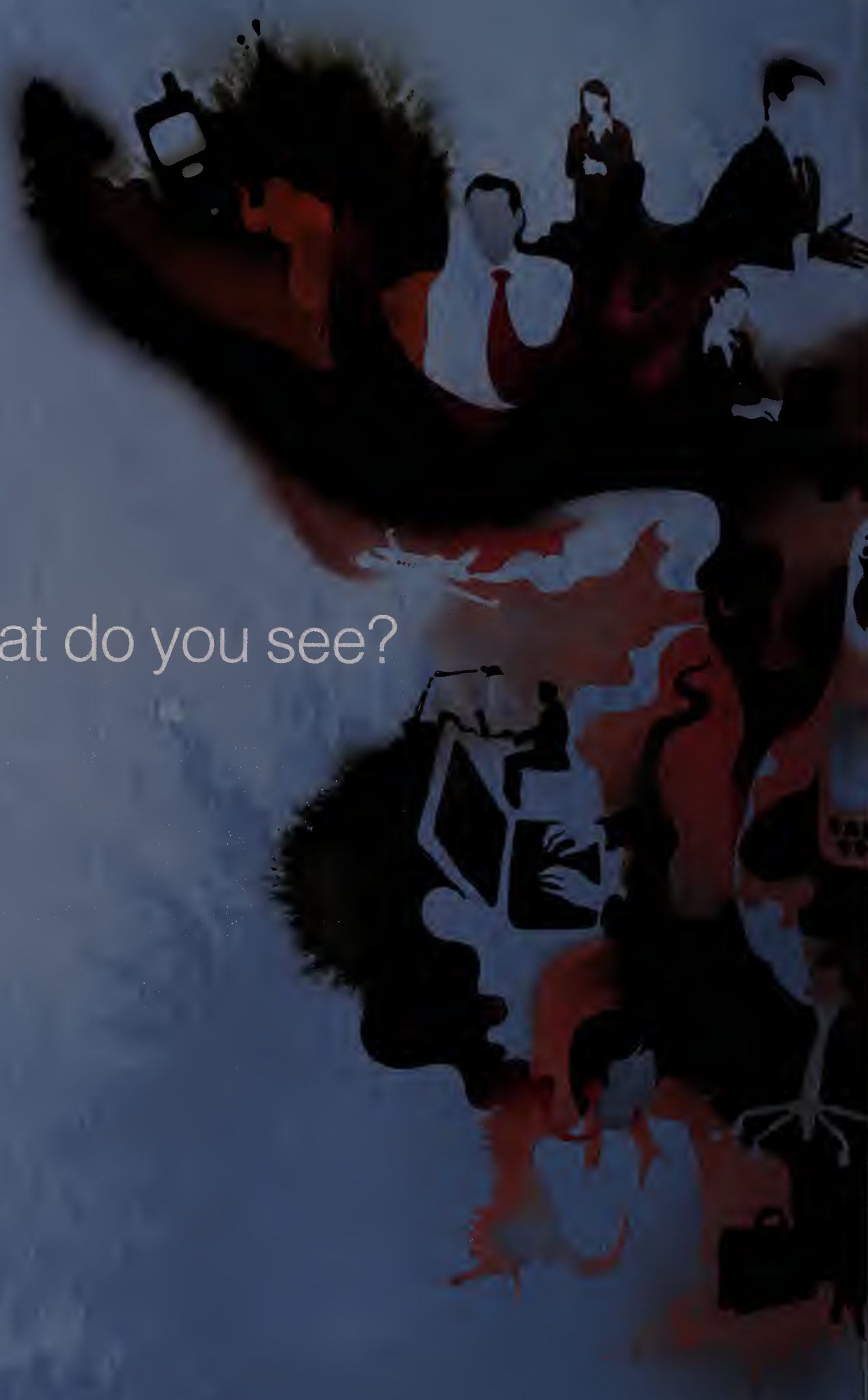
BY MERIDITH LEVINSON

PLUS

**KNOWLEDGE
MANAGEMENT**

New tools that
people actually use

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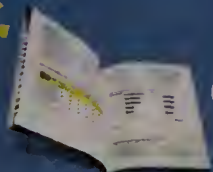
what do you see?

what makes you special?



what does your CEO see? *

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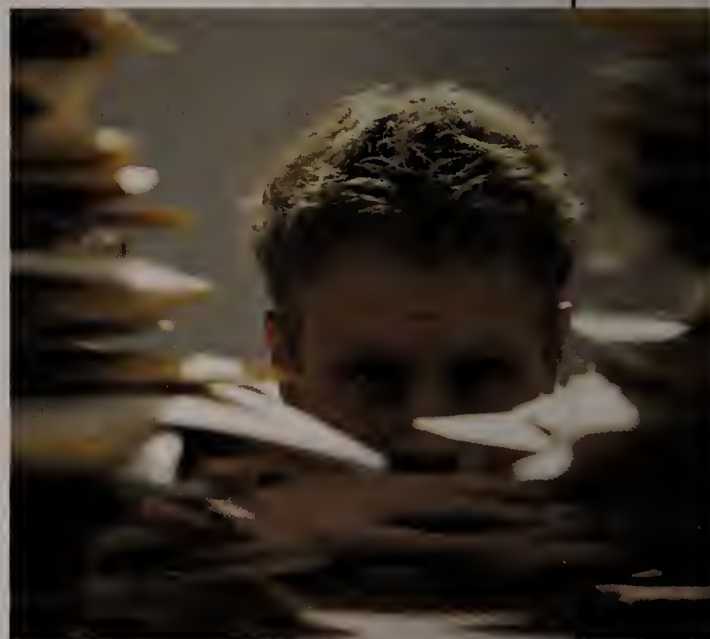
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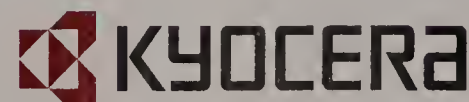


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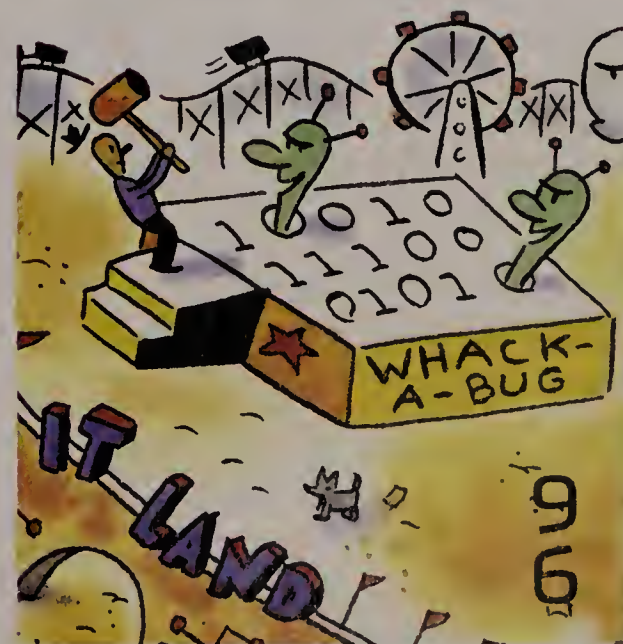
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[CAREER]

THE WRITING ON THE WALL

Your boss has been avoiding you. The company's been sold, and your coding skills are old. Maybe it's just paranoia, but maybe you really are about to get the ax. Here are some warning signs that could help you avoid the unemployment line.

» www.cio.com/careers/signs_youre_getting_fired.htm

[WEIGH IN]

HOW TO AVOID DAMAGE FROM LAPTOP THEFT

The holidays have arrived, and so has the travel frenzy. The odds of corporate laptops disappearing suddenly just increased. We hope it doesn't happen to you, but here are three steps that can significantly reduce the risk of confidential data loss.

www.cio.com/weighin/index.html

DON'T CAVE IN TO USER DEMANDS

At first glance, a new enterprise application will seem strange to end users within your company, and they will likely come to you with a laundry list of modifications. Just say no, says Phillipe Beaurain of IFS.

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[TREND WATCH]

EYES WIDE OPEN

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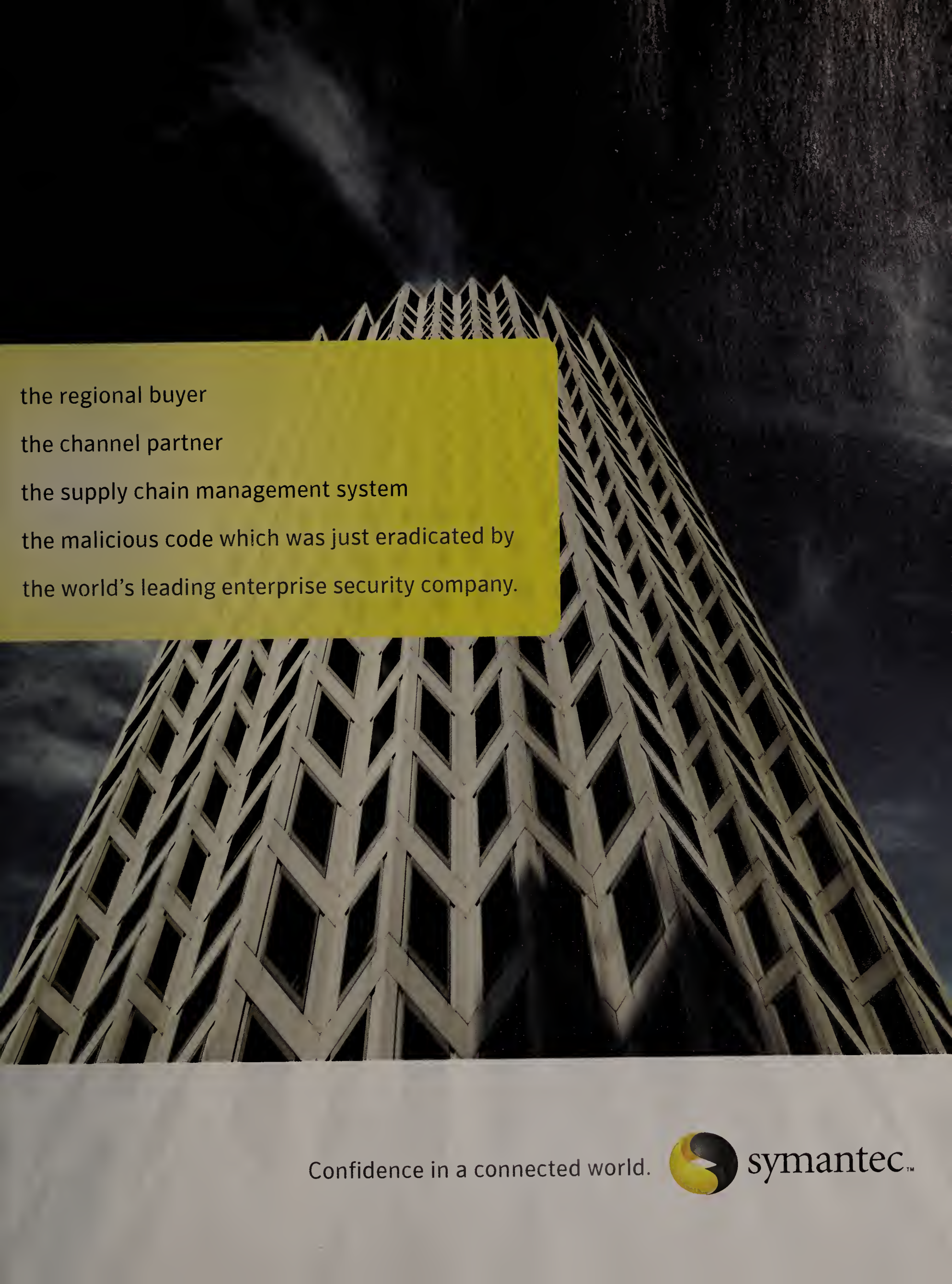
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Nothing Is Simple

The long and winding road to SOA may have a surprise—an unpleasant one for CIOs—at its end

It's an IT truism that hype precedes take-up. That is, when you first hear about a new technology or process, it's all wonderful. (It's simple and fast to roll out; it will cut costs, make your business more agile and efficient, and give you dashboard abs.) Then disillusion sets in. (Hey, this is pretty complicated; it'll take me forever to implement; the ROI—if there's an ROI—is somewhere down the road; and it won't do a thing for all the flab settling in around my gut.) Finally, people actually start using it, and often the truth is that, under certain circumstances, it's pretty good, although in no way a panacea for whatever challenges the organization faces.

Sometimes, of course, the ultimate reality never matches the original hype. Voice recognition? ("I want a flight to Boston."

"Houston?" "No, Boston." "Not Boston?"

"Yes, Boston!" "Please hold.")

Artificial intelligence?

Still not so smart.

Service-oriented architecture?

Right now we seem to be passing out of the hype phase ("You gotta do it now!

It'll cut your development costs and guarantee IT-business alignment forever!") and entering the disillusionment phase. Building an SOA, as we learn in "The Four Stages of Enterprise Architecture" (Page 66), entails a long, drawn-out process that, according to two MIT Sloan Center for Information Systems Research studies—"IT Architecture as Strategy" and "IT-Driven Strategic Choices"—upon which the article is based, can take decades, according to Jeanne W. Ross, the studies' principal research scientist.

There are lots of reasons why it will take so long. Before you can even begin thinking about encapsulating your company's business processes in reusable services, you've first got to integrate all your various data silos (that's Stage 1). Then you have to promulgate standard IT platforms across the enterprise (Stage 2). Then you have to optimize your IT and your business processes (Stage 3). And then, finally, you're ready to begin figuring out which of these optimized processes can be expressed in technology and made available to the business users (Stage 4).

And what finally happens in Stage 4? Something a wee bit scary. In Stage 4, "the lines between IT and the business are blurring," says David Saul, senior VP and head of the Office of Architecture at State Street, "and it's clear that someone will have to manage both." And that may put in jeopardy the careers of many CIOs who don't have the firm handle on the business we'd all like. (You know who you are.)

Could you be innovating yourself out of a role in a future SOA-enabled enterprise, in which business users control IT? I asked Accenture CIO Frank Modruson just that, and he had these reassuring words: "The business always changes." Which means that CIOs will always be needed to design new IT for new business needs.

Whew! Had me worried there for a moment. Do you feel reassured? Let us know.

"The lines between IT and the business are blurring, and it's clear that someone will have to manage both."

—David Saul, SVP and head of the Office of Architecture, State Street

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Employee Power

Where will 2007's innovative ideas come from?
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Driving innovation is job number one for CIOs in 2007. While innovation agendas may vary from company to company, the basic ingredients of innovation are transferable. But where do you find innovation? And what internal and external market forces might impede your innovation agenda next year?

Brian Truskowski, IBM's CIO, outlined his perspective on those topics at a recent *CIO* conference.

Truskowski says that "the most significant source of innovative ideas" isn't your system integrators or consultants, and it's not your competitors, either. And the best ideas don't come from the halls of academia. Rather, the most innovative ideas come from a rich source that's all around you all the time: your employees.

I found that incredibly profound. How often does your company reach out to employees to ask them for their ideas on how the firm can be more innovative? Employees are your front line of engagement with partners and customers which, according to Truskowski, are the two next most significant sources of innovative ideas.

In other words, to be more innovative in 2007, harness employee power!

Truskowski went on to offer his thoughts on the biggest internal obstacles to an innovation agenda. For those, look no further than your CEO's desk. Is your corporate culture unsupportive, hostile to new ideas, overly risk averse? That starts at the top. How about not enough dollars to do the job? That will put a crimp in any innovation agenda.

Looking outside the walls of your company, the biggest obstacle to being more innovative is governmental and legal restrictions. How much more innovative is your company because of Sarbanes-Oxley? Not very is our guess. Economic uncertainty is next on this list, followed by immature enabling technologies.

CIOs live in the world of operational and capital expenses. While most would say the fiscal fuel for an innovation agenda is in your capital expense budget, I would disagree. Rather, look to the salary line, not only of your IT department but for your entire firm, and institutionalize a way to tap into your people for ideas and recommendations on how you can be more innovative in the years ahead.

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Do Your Homework

Stephanie Overby correctly identifies that proper sourcing goals are necessary to successfully outsource IT processes ["Just Say Know," Oct. 1]. It's true that corporations that are in relationships with IT service-oriented companies for outsourcing their processes should take creative initiatives to establish long-term associations and encourage joint decision planning. It's also important for companies to involve their outsourcers in daily ops and understand the internal processes and culture of the people. This helps the outsourced process or product to be more in line with the business strategy of the mother company.

SAUGATA DUTTA

Senior Business Analyst
Cincinnati Financial at Atlas SoftwareTech

Many organizations fail to assess long-term implications of outsourcing contracts and focus too much on short-term gains. This tendency results in sourcing decisions that are overly favorable to external contractors. Companies must evaluate if outsourcing is really beneficial

to their long-term performance. In many cases, outsourcing contracts are like low introductory interest rate credit cards. At a glance, outsourcing is tempting because outsourcers propose very attractive deals. However, just as you should read the fine print of those low-interest credit cards, your company should be mindful of hidden costs of outsourcing and of increasing costs for renewed contracts. Although companies tend to be aware of costs involved in the transition to outsourcers, they don't usually take into account costs for the transition *back* in-house if outsourcing is ineffective. Therefore, for an outsourcing contract to make long-term financial sense, it has to pass many tests based on alternative future scenarios.

Outsourcing is also like a navigation system in a car. You used to figure out directions; now you outsource them to the navigation system. But what would happen if the system should fail when you are lost in the Rocky Mountains? As you rely more on the navigation system, your own sense of direction gets diminished. Similarly, organizations may lose essential competencies for competition and growth as they rely on outsourcers for their IT functions and operations. Outsourcing makes sense only when it can deliver substantial gains not only now but in the long run.

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Privacy and Progress: We Can Have Both

I disagree with Robert Atkinson's article "The Luddites Are Coming!" [Oct. 1]. I have yet to meet someone who is actively against the Internet. There is no "war against IT." At least not yet!

I find that IT's strongest critics come from

within our own ranks and appear on the pages of your magazine and similar publications. Perhaps this is because we understand the threats and possibilities of IT.

The public does have legitimate concerns, especially if their personal data is stolen from an unsecured laptop or through an online hack. Everyone should be concerned if rootkits and "back doors" allow hackers to scan hard drives or record keystrokes. We should be angry if thieves divert legitimate network traffic to illegal Web servers that spoof legitimate sites. This is the new reality of an IT world. Unless we get security under control, we are going to lose public support.

IT professionals know that biometrics do not provide foolproof security. We are very concerned about a society where people's financial data, phone records and Social Security numbers are available for \$75 online, and we need to advocate for the individual in terms of privacy, reputation protection and online security.

I believe we currently have public support and that almost everyone realizes that network technology has benefits. However, as identity chips are implanted in livestock and people, we will face renewed questions about surveillance issues and privacy rights. We can respond by targeting imaginary "Luddites," or we can develop more standards and protections for consumers before we release smart systems and biometrics into popular use.

FRED PIERRE

CEO
Data Doctor

What Do You Think?

Send your thoughts and feedback to letters@cio.com. Letters may be edited for length or clarity. For a link to the articles mentioned, go to www.cio.com/archive.

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Ambition Is Not a Dirty Word

CAREER Stop worrying whether coworkers think you're a bitch, and learn to speak up and promote yourself. That's the advice for women who aspire to occupy the C-level suite, according to a new wave of advice tomes. The fear of being labeled negatively keeps women from achieving their career goals, says Debra Condren, author of *amBITCHous*, which hits shelves in January. Should women in IT pay attention to the current buzz on ambition? Yes, say female CIOs we spoke to: You must learn to build relationships and communicate well to succeed without being slapped with the B word.

"Women don't use their power to build a platform for themselves at work, because they are afraid it's going to make them seem arrogant," Condren says.

Other recent titles such as *Girl's Guide to Being the Boss (Without Being a Bitch)*, *Women Don't Ask* and *Nice Girls Don't Get the Corner Office* urge women to avoid self-imposed career mistakes. "We're not talking about the glass ceiling anymore," says Condren. "We're talking about what we're doing to ourselves. Women are prone

Continued on Page 20



Real-Time Translation Software Heads to Iraq

VOICE RECOGNITION

The U.S. Joint Forces Command will deploy IBM Research's speech-to-speech translation software to help U.S. forces in Iraq better communicate with Iraqi police, military forces and citizens. The software's real-time translation capabilities could help the military make up for

a lack of linguists proficient in Iraqi Arabic.

IBM Research's Multilingual Automatic Speech-to-Speech Translator system (Mastor) combines work on automatic speech recognition, natural language understanding and speech synthesis that's been under way at IBM since 2001, says David Naha-

moo, CTO of speech technology at IBM Research.

When used in Iraq on ruggedized Panasonic Toughbook laptops, Mastor will act as a bidirectional, English-to-Iraqi Arabic translator capable of handling more than 50,000 English words and 100,000 Iraqi Arabic words.

For example, a U.S. military

trainer looking to work with an Iraqi policeman could speak English into a laptop's microphone. The IBM technology would recognize his English speech, translate it into Iraqi Arabic and then vocalize that translation for the Iraqi policeman to hear, and vice versa.

Later this year, IBM's commercial partner, Sharp, plans to introduce a Japanese-to-English translation PDA based on some Mastor technologies, Nahamoo says.

—China Martens



MIT Puts Its Mind to Collective Intelligence

COLLABORATION Many heads are often better than one, and the brainiest institution in the country wants to officially brand that idea as a science.

MIT has launched its Center for Collective Intelligence (CCI) to study how individuals harness technology to act intelligently. The center hopes to build on the current definition of collective intelligence by, fittingly, using wikis and other modes of collective input, said Thomas Malone, CCI's director, at the center's October launch.

During the past few years, collective intelligence has captured growing interest. Wikipedia—the online encyclopedia where users can add, subtract or edit information on any subject—pioneered the collective intelligence movement, starting a controversial debate about the value of information created by a group. The best-selling book *The Wisdom of Crowds* by James Surowiecki has also fueled enthusiasm for the concept.

While Surowiecki's book made a splash everywhere from cube farms to corner offices, Malone emphasizes that the center wants to take a more serious and academic approach to collective intelligence.

"There are people who think that collective intelligence is magic, and if you just add it, it'll make everything wonderful," said Malone.

To begin defining collective intelligence, CCI has launched the Handbook of Collective Intelligence, where you can contribute and edit, on a wiki-style platform. (Find a link in the online version of this article at www.cio.com/120106.)

"We hope that in the long run the work we do in this center will help contribute to scientific understanding in many different disciplines," Malone says.

—C.G. Lynch

Ambition

Continued from Page 19

to second-guessing themselves, not getting (or taking) credit for their work and not promoting themselves."

Promoting yourself in a male-dominated field can be tricky: In 2005, the Information Technology Association of America reported that women make up 32 percent of the IT workforce. And it's harder for women to become CIOs than to achieve any other executive role, according to a 2006 study done by the University of California, Davis.

Female CIOs say differences in style and priorities can hold you back if you don't manage them. "Men spend more time together in social settings like the golf course or the bar after work," says Judy Stahl, a former CIO for Harvard Business School. "Women may not participate as much in these nonwork activities that create stronger partnerships which can lead to promotions." Stahl chose to spend more after-work time with her husband than with coworkers, so she worked hard to build relationships during business hours, regularly checking in and showing genuine interest in others' work.

Ambition, instead of meaning the pursuit of a passion, has come to represent a person who will step on others to get to the top, says Campbell Soup CIO Doreen Wright. Communication skills are key, she says. She recommends the book, *You Just Don't Understand: Women and Men in Conversation*. One mistake: "Women tend to be self-deprecating; they diminish compliments by saying something negative about themselves," she says.

To prevent yourself from being labeled negatively, spend extra time "explaining why you are doing things the way you are," says Wright. "A man behaving aggressively doesn't have to explain why they are doing it, but I take the extra time to explain my position."

—Margaret Locher

SURVEY SAYS:

Missed Opportunity

STRATEGY Too many companies use customer surveys to validate current thinking rather than to drive strategic change, says customer relationship guru Lior Arussy, CEO of Strativity Group. Customers view taking a survey as an opportunity to suggest changes, but companies aren't acting on the advice, he says.

SOURCE: Strativity Group, "Discovering Answers," September 2006 study of 214 companies



59%

of firms design customer surveys with strategic intentions.

23%

manage to obtain buy-in from colleagues for change.

45%

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No blurry pictures here: Samsung's SCH-B600 cell phone packs a 10-megapixel image sensor—better than most full-fledged cameras—and a 3X optical zoom lens. On sale in South Korea for 900,000 won (\$900).

DIGITAL BLING YOU CAN'T BUY IN THE UNITED STATES

GADGETS Many of the coolest tech gadgets show up in Asia before they do in the United States. Here's a peek at the sleekest gifts you can't buy this holiday season—at least, not without a long plane trip.

TOSHIBA HD DVD RECORDER

Dying to record shows from high-def TV? Toshiba's RD-A1 recorder has 1 terabyte of hard disk space alongside an HD DVD optical drive. The hard disk stores about 130 hours of digital HD terrestrial TV; a dual-layer HD DVD-R disc holds about 230 minutes, Toshiba says. Price of admission: 398,000 yen (\$3,380).

SHARP W-ZERO3 ES SMART PHONE

This slider-type Windows Mobile phone, with a complete qwerty keyboard, is sure to spark PDA envy. You reveal the keyboard by sliding the upper half of the phone away from the lower half. Sporting a VGA (640x480 pixels) resolution 2.8-inch screen, this phone also lets you transfer images from a camera via USB. It costs 29,800 yen (\$253).

PIONEER RAKU NAVI

Pioneer's car navigation system not only helps you get around in Japan but also serves music from a 30GB hard drive, offers 3-D city images, places a phone call via voice request and, for passengers, tunes in to digital TV. Yours for only 147,000 to 325,000 yen (\$1,250–\$2,764).

NTT DOCOMO P903I

Consumers in Japan no longer have to worry about losing their cell phones and having someone make calls, or worse. The P903i cell phone from NTT DoCoMo and Panasonic comes with a companion RFID key card, to be carried in a pocket or handbag. The phone works only when in proximity to the key card. Cost: 20,000 to 30,000 yen (\$170–\$255).

—Martyn Williams

STRATEGIC PLANNING: The Troops Want More

MANAGEMENT REPORT Strategic planning is vital to an organization's ongoing success, but many executives aren't happy with their company's approach to the strategic planning process. In an online survey of 800 executives conducted by The McKinsey Group consultancy, fewer than half of respondents reported satisfaction with their company's development of strategic planning.

"We discovered that people tended to be significantly more satisfied if their companies did have a strategic process," says Renée Dye, a senior practice expert in strategy in McKinsey's Atlanta office. Of those who reported that their company implemented a formal strategic process, 79 percent were satisfied with strategy execution.

Another pain point: Only 23 percent of respondents said that a formal strategic process drives important decision making at their company. The majority, at 52 percent, credited small senior groups with making critical strategic decisions.

Notably, there's a strong correlation between monitoring of strategic plans and executive approval of those plans, according to the study. Satisfied respondents were twice as likely to say their board checks the company's progress against the strategic plan. Still, only 56 percent of respondents overall reported that their company monitors its strategic initiatives.

Here's where CIOs have an opportunity to improve their company's strategic process, and subsequently, heighten executive satisfaction, says Dye. "Almost nobody reported that they did track the process. That's where I think the CIO could play a tremendously important role.

"CIOs could help establish the appropriate performance monitoring systems," once strategic metrics are agreed upon, she says.

Dye's other advice for C-level executives: Communicate the strategic plans better. "We are not convinced that companies do a good job of articulating that they know what they want to achieve," she says.

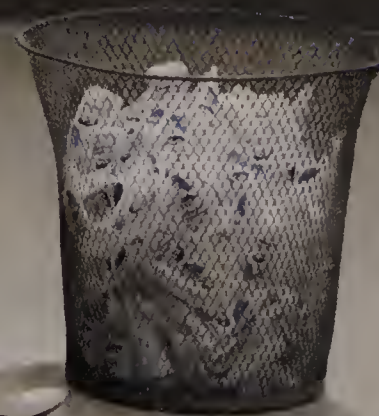
—Lauren Capotosto



Jeff graduated from MIT and belongs to Mensa®.

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Stargazing, 2.0

For the people on your list with stars in their eyes, Celestron's SkyScout may be the perfect gift. This handheld device, the size of a small camcorder, uses GPS technology to identify stars, planets and constellations, and provides their history and mythology. Point the handheld at a specific target in the sky, and SkyScout will identify it. Or, choose a star or planet from the database, and SkyScout will help you find it. Using arrows on the viewfinder (much like a GPS mapping

system), SkyScout can direct you to your celestial destination. The SkyScout runs on two AA batteries. \$399



Tech Treats FOR EVERYONE ON YOUR HOLIDAY LIST

BY KATHERINE WALSH



MP3 Maven's Stocking- Stuffer

For superlative sound from MP3 files, check out Creative's Xmod. This device restores details that MP3 files lose during compression. Creative's Xtreme Fidelity technology analyzes tracks, identifies damaged parts and converts them to approximately 24-bit sound quality (CDs are 16-bit quality) by enhancing high and low frequencies. Essentially acting as a surrogate sound card, this device connects to your MP3 player or Windows or Mac PC. \$79.99

The Ultimate Clicker

You can't control the universe from your living room, but you can control the electronics in your house (up to 15 devices) using Logitech's Harmony 1000 remote. Ditch the pile of clickers on your coffee table: This universal remote uses infrared and radio frequency technology to control HDTVs, DVD players and even household appliances (like ceiling fans and air conditioners). When paired with the Harmony Wireless Extender (\$149.99), which has a wireless range of 100 feet, the remote can control devices in multiple rooms. \$499.99



A Little Down Time, Circa 2007



Lands' End has created a beanbag chair the likes of which you have not seen, or heard, before. When connected to an MP3 player like the Apple iPod, the iBeanbag Chair, which features dual speakers and a subwoofer for surround sound, promises to deliver a "live experience." Feel like watching a movie? It also hooks up to a laptop or DVD player for a home theater experience. Perfect for teens. \$199

A Computer Bag Fashionistas Can Love



Today's notebook PCs are sleek, but most bags that hold them are stuck in Uglyville. A few bags with fashion and business sense have emerged, like the Elegant Leather Tote from Targus. Its padded compartment fits laptops with up to 15-inch screens. Available in red or black, it has plenty of interior pockets. \$149.99

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Infrastructure and Security Management Is a Top Business Priority Across Industries

CIO'S THOUGHT LEADERSHIP SERIES

Note: CIO Publisher **Gary Beach** recently sat down to discuss top business and IT issues with five noted leaders: **Gregor Bailar**, CIO/VP, Capital One Financial; **Carole Cotter**, CIO/SVP, LifeSpan; **Lynn Vogel**, CIO, M.D. Anderson Cancer Center, University of Texas; **Todd Lunsford**, CIO, Quicken Loans; and **Karen Lay-Brew**, VP Licensing, Pricing and Operations, Microsoft Corporation. Over the course of an afternoon, these five leaders shared insights into three strategic business/IT issues: The Business Value of IT, Infrastructure Security and Management, and Innovation. The dialogues were recorded for a forthcoming series of webcasts and CIO inserts. Following is an excerpted transcript from the Infrastructure Security and Management dialogue.

Gary Beach: Let's talk about infrastructure security and management. It seems like a fairly straightforward question here, but how important is that subject area to you at your business? Is it job one?

Todd Lunsford: Just from a reputational risk perspective, being in the financial services industry people are trusting the privacy of their information with us. I know I wouldn't do business with a company that doesn't take that seriously. Of all the things that we have on our plate, the No. 1 thing, our No. 1 obligation, is to protect the privacy of our client data.

Beach: Lynn, what about you at the hospital?

Lynn Vogel: We look at security as a two-way sort of challenge. On the one hand we're inundated every day with literally hundreds of thousands of spamming attempts. So part of our challenge is to keep the bad stuff out. The other side of that, however, is that in health care we don't own the data on our patients. Legally, the data that we store is stored as our being custodians of the data rather than as owners. So we have a very significant obligation to keep that data inside and protect it on behalf of the patient. It's sort of keeping the good stuff in and keeping

the bad stuff out. And we take that very, very seriously. I was talking to an auditor a couple weeks ago, and he pointed out that the IT organization is probably one of the most audited organizations in the entire company, because the data represent one of our greatest assets, and protecting it, therefore, becomes a topic that goes all the way up to our CEO.

Beach: Karen, just amplify the question in terms of security.

Karen Lay-Brew: I was just reflecting on, what, 2001, July, 2001, Code Red. And then two years later



Slammer, you remember that? It was a nightmare. I was on the buying side then.

Beach: At Eaton?

Lay-Brew: No, actually, I was in Allied Signal Honeywell. So, yeah, that was a heartache for me as

a CIO, the fact that there were security breaches. Things got in, and I don't think Microsoft would ever, ever want to repeat that again. I can't remember what the latest tally was in terms of the actual cost of those two incidents. But now wearing the Microsoft hat – in

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2002, Bill Gates came out with Trustworthy Computing approach. That really encapsulates both sides of what Lynn just said, in that security in terms of keeping the bad stuff out is a cornerstone in order for us to become reliable and available and keep the right information inside. Unless you can be sure about who's coming in and out of your environment, your domains, there's no way that you can be sure of what information has been

kept private. So I prefer to see those two as different sides of the security coin.

Carole Cotter: I'd just like to add to what Lynn said about health care. In addition to what we have always been concerned about – in terms of keeping the right information inside and the right information outside – we know that health care will be improved if we can share information more readily than we do today. For example, it's probably a very good idea to share much more information with patients than we do today about their own health care. We cannot do that until we're sure that we have a secure environment. So security is really, really important to our achieving our goals of using IT to improve the quality of health care.

Beach: Good points. Todd, how would you answer?

Lunsford: You know, it's a balance to combine security aspects and still provide the tools and features that allow people to be productive. A couple of examples: We do allow Blackberry devices and remote devices, but we manage them all centrally so we can control the fact that there is a password required; we can control time-outs and ultimately have the ability to wipe the device out. We also have the ability to limit what data is available on those devices. Likewise in the area of laptops. There's certainly a need for people to use laptops. But we require that anything on the laptop is encrypted. So we can do both: We can manage things centrally and provide some of those tools and features that allow folks to be more productive.

Want to read more about Infrastructure Security and Management? The conversation continues here: www.cio.com/webcast/sponsored/microsoft/infrastructure

Next issue: IT Leaders discuss Innovation

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Where to Win Your First CIO Slot

CAREERS Landing your first CIO job by moving up inside your present company isn't easy. First of all, the law of numbers works against internal director-level prospects: There are far more candidates for CIO positions than there are openings to fill, says Jim Coffou, a partner in the Chicago-based executive search firm Coffou Partners. Second, since companies look to mitigate risk when they hire executives, they're inclined to look for someone who's "been there and done that," adds Coffou. So they open up external searches, which makes moving up even harder for internal candidates.

"At the C-level, I would venture to say that most hirings do not come from



**SAM
CHANGIZI**



**MARTHA
MORPHY**

within," says Coffou. "Chances are, your first CIO opportunity is going to come from outside the company."

But getting your big break internally isn't impossible. Whether you're an internal or external candidate, some of the key criteria you must demonstrate, Coffou says, are the abilities to develop and implement an IT strategy aligned with the business, to create and maintain strong relationships across functional areas, and to manage large budgets and complex reporting relationships. Here are a few IT directors recently turned first-time CIOs.

Adley Francois, 30, begins his first CIO

gig at First Financial Federal Credit Union in Wall, N.J., on Dec. 4. First Financial hired him from HEW Federal Credit Union in Alexandria, Va.

Colorado Springs-based Pantel Systems hired **Adam Self**, a systems architect from EDS, as its new CIO.

Sam Changizi's promotion from IT director to CIO at New Age Electronics recognizes the leadership role he played in developing and executing New Age's e-commerce strategy and in implementing ERP solutions.

Martha Morphy worked her way up to CIO at the National Archives and Records Administration (NARA) after seven years with the agency. She began her career with NARA as a software architect.

—Meridith Levinson

CIO Read Meridith Levinson's **MOVERS AND SHAKERS** blog at blogs.cio.com.

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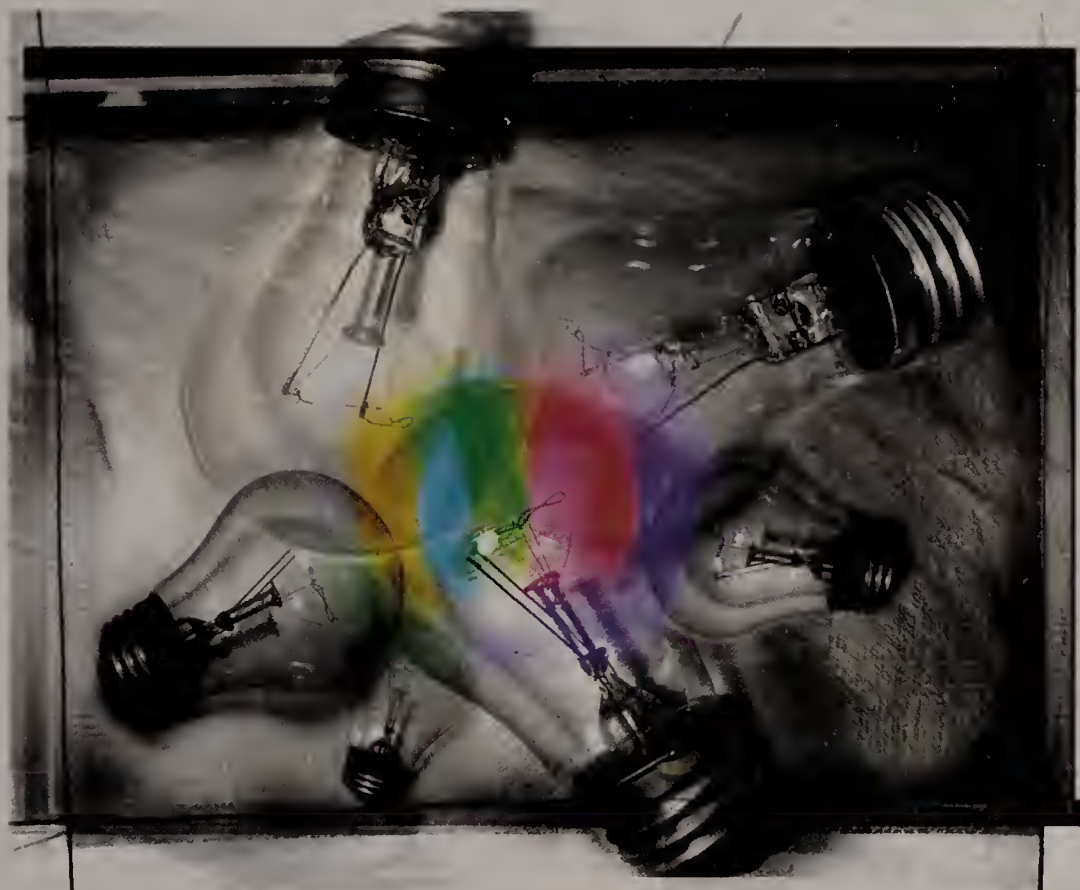
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Edited by Laurianne McLaughlin
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New, focused,
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rules about KM.
The best part?
People will
actually
use them.

Knowledge Management 2.0

BY SCOTT SPANBAUER

KNOWLEDGE MANAGEMENT | Business runs, by default, on e-mail. It's always there, and it just works, so we end up using it for everything—as a telephone, as a filing cabinet and as a conference room. But the trouble with e-mail is that it happily gobbles up our ideas, crucial documents and business acumen and doesn't give them back.

So why haven't enterprisewide knowledge management tools caught on like wildfire? There's one main problem, says Gartner VP of Research Jeffrey Mann: Users and IT administrators hate them. Sophisticated KM products like EMC Software's Documentum put the burden of management on the users, who must take additional steps to access documents and register them with the system. And some IT departments dread the arrival of Microsoft's more user-friendly SharePoint because of its hunger for in-house server and support resources.

But recently, a new wave of smaller, lighter and less expensive tools has started to go where the larger KM systems often don't—bringing corporate knowledge back out into daylight.

Borrowing from blogging, file sharing and other successful Web 2.0 ideas, new options like iUpload's Customer Conversation System, Tacit Software's Illumio and Koral's eponymous collaboration tool aim to help companies solve specific KM problems without forcing additional work or structure on collaborators.

Attention, CIOs: A notable aspect of this new generation of knowledge management tools is the way they offer themselves for casual involvement. "It's not as huge a commitment to use any of these things as it is when you have to set up a server, and install it and license it," says Gartner's Mann.

Acting independently, and without need of server space or tech support, busi-

Corporate blogging promises to put information out in the open, where anyone can find it.

ness units can simply try out the new KM systems, sometimes in stealth mode. "In many cases they don't have to sell it to IT, they just go and do it," notes Mann. "You just [use] a credit card, or it's free." Now's a good time for CIOs to get up to speed on what these apps can do.

Spur Grassroots Collaboration

Until last year, one of the knowledge management problems facing insurer Northwestern Mutual was the way the company's formal hierarchical structure and communication channels often inhibited information flow across departmental boundaries. Relying heavily on e-mail and structured reporting systems, employees tended to send information up the chain of command, in hopes that the people on top would take action and disseminate the

results back down and across to leaders in other departments. Naturally, this often prevented one department from knowing about related projects under way in other departments, making it difficult to coordinate efforts or learn from what others were doing.

Charged with addressing these communication bottlenecks and fostering a culture of open communication, Assistant Director of Corporate Communication

Andrea Austin found an answer in the form of corporate blogging: This promised to put information out in the open, where anyone could find it.

The problem with e-mail, according to Austin, is one of reach: "You may be aware of only some subset of people that may have an interest in what you're working on," she notes. Sharing information via a blog brings those people back into the loop. "You're not determining and limit-

Do-It-Yourself KM

At Parsons Brinckerhoff, an approximately 10,000-employee engineering firm, knowledge gets very granular—like hands-on experience designing a particular type of bridge—and it's often needed immediately to solve a project problem or win a new engagement. So a KM strategy that connects subject matter experts is crucial. But no one KM product has cut it for the firm, says Christopher M. Rivinus, the company's leader of knowledge systems. So while his company uses some KM tools, it also supports a big do-it-yourself effort.

"If you cannot get people to change their behavior, you're sunk," Rivinus says. "The more complex the [KM] product, the harder it is for people to change."

Today, he's beta testing Microsoft SharePoint 2007, which he hopes to use in the future to crawl e-mail messages for some content. But e-mail crawling alone isn't ideal, he says. "I'm more interested in a tool that tells me this person has written about this topic three times a day for so many years. That's a tool that would be important to us as engineering consultants."

To make up for this and other KM app shortcomings, Parsons Brinckerhoff's DIY effort stresses what it calls practice area networks, or PANs. Since 1994, the firm has encouraged these groups of like-minded experts to form voluntarily. Today the firm actively supports 54 PANs, around industries like aviation, or areas of expertise like tunnel engineering.

PANs help engineers get answers from global experts quickly, Rivinus says, and they spur less formal communication, say on career development.

At first, the groups primarily used e-mail and meetings to share knowledge, but they now use webcasting as well, so sessions can be recorded and broadcast on demand, Rivinus says.

CIOs who want to set up a DIY effort will need to allocate administrative support and training funds to make it work, he says. "These people are providing business value. You have to give them real resources," Rivinus says. For example, he says, make sure the leaders get training. And keep participation voluntary, he advises.

What kinds of results have the PANs delivered? The firm's CADD PAN tracks the number of floating software licenses (shared among staffers) worldwide and keeps the number and expense to a minimum. It also helps IT make better upgrade decisions, he says. In another example, the firm's environmental community of practice responds to specific inquiries from clients, then turns appropriate answers into best practices, which can often be used to help win future work, Rivinus says.

—Laurianne McLaughlin



_INFRASTRUCTURE LOG

_DAY 12: No one can get real-time answers. No one can collaborate. Unmanaged public IM is a security nightmare.

_So Gil brought in a "collaboration accelerator." I said it looks like a cannon. He said I had a small mind.

_DAY 14: The answer: IBM Lotus® Sametime® 7.5. It's not just IM and Web conferencing, it's an affordable platform for running the business in real time. It's encrypted. Has tons of features like VoIP and location awareness. And it works seamlessly with leading public IM networks. Everyone has real-time answers now.

_We've even recovered most of our employees.



Lotus.

Download the Lotus Sametime 7.5 demo at:
IBM.COM/TAKEBACKCONTROL/SAMETIME

ing who your potential audience may be," she adds.

Not just any blogging application would do, however. Because Northwestern Mutual is part of a highly regulated industry, it must be ready to produce a complete record of all communications at any time. The company chose iUpload's Customer Conversation System, because it combines Web-based blogging and content management with enterprise security, workflow and regulatory compliance tools. Northwestern especially liked its extensive versioning capabilities.

"We need to be able to document at any point in time that we know exactly what content has appeared in anything that we produce," says Austin. "We couldn't have moved forward with this application if it did not have that capability."

Moving forward was also easy because iUpload dovetailed with Northwestern Mutual's existing user authentication software to ensure a single sign-on process for users. Finally, because the blogs are externally hosted on iUpload's servers, IT gains flexibility and can free up resources to work on other projects, as opposed to managing blogs on the company's own hardware, Austin says.

The costs of a blogging tool like this one don't even compare to those of traditional KM systems, which easily run into the millions; iUpload Customer Conversation System Enterprise Edition starts at \$1,500 per month for 100 users. (Smaller groups can get going with iUpload Express Edition, which starts at \$250 per month for 10 users.)

Northwestern Mutual's experience echoes the larger trend among KM 2.0 apps: A business unit sought out a tool to solve a specific, tactical KM problem, in this case, opening up communications (as opposed to establishing a formal, overarching KM program). Northwestern's IT department helped the business unit users navigate the technical choices and select iUpload among several blogging tools. Both users and IT liked the solution to the tactical problem. This scenario

is a long way from the old model for KM, where users often were unilaterally presented with a complex KM system by IT.

Northwestern considers itself still in the early phase of its experience with iUpload, with about 100 people actively blogging since an enterprisewide rollout to 5,000 users in June. But it's working well, Austin says, to jump-start collaboration and spark a larger change in the corporate culture. "This is the first time we've had a grassroots application that allowed employees to share what they're working on directly," says Austin.

Share Thy Neighbor's Expertise

Sometimes corporate knowledge remains locked up in employee files and inboxes even when other knowledge management tools are in use. For a couple of years now, Procter & Gamble has been looking for new ways to retrieve these internally exiled intellectual riches, says Arthur Hart, section manager of P&G's information and decision solutions department. He tried out several "expertise finding" KM applications designed to index and publish mail and files from end user PCs. These failed because they required the users to keep their own profiles of expertise up to date, which they never remembered or had time to do, he recalls. Other programs published too much of the data they discovered, and employees perceived them as an invasion of privacy.

Hart eventually heard about a similar program that combines automatic discovery of corporate expertise with user control over privacy. Tacit's Illumio, available as of Nov. 15, is a Web-hosted information broker that accepts information requests, such as, "How do you hire good employees?" and sends them out to other users. Individual users may optionally install one of two desktop search utilities, Google Desktop and Microsoft Desktop Search, which Illumio queries for answers to requests. However, Illumio doesn't just send your data out; no information leaves your computer unless you

By **2010**, less than **10%** of Global 2000 organizations will have specific **KM programs**, although virtually all of them will use the concepts and techniques. SOURCE: Gartner

explicitly agree to send it out.

Illumio consists of a Web-based host site run by Tacit, the Google or Microsoft search software installed on your PC that digs up data, and the Illumio client software, also running on your PC, that acts as a broker between the two. The Illumio client forwards requests from other Illumio users to the desktop search tool, then asks for your permission to send out the data discovered. According to Tacit, Illumio will come in several flavors. The standard version, for use in public groups via the Internet, will be downloadable for free. Pricing of a managed, private group option with added controls, for enterprise users, had not been set at press time. (Qualifying enterprises that sign up in 2006 can get an extended free trial, as a reward for early adoption, the company says.)

Hart, who has been beta testing Illumio since June, hasn't made the final decision



_INFRASTRUCTURE LOG

_DAY 18: Everything is frozen. It's our processes. They're inflexible. We can't respond to change.

_Why did we lock ourselves in like this? Brrrr.

_DAY 19: A way out. IBM WebSphere middleware for Business Process Management. It lets us streamline business tasks. We can test our processes before we roll them out and monitor performance once they're deployed, and reuse is easy because it's based on a service oriented architecture.

_Everything's unfrozen now. Wow, it's good to feel my toes again.



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whether to recommend it for use at Procter & Gamble. He'd like to do a bit more testing. "We believe Illumio might solve the problem if we could get a large percentage of the organization to install a desktop search utility and use it," Hart says.

"You have to ask if the tool will fit in your corporate culture," he says. Ultimately, success will depend on how willing employees are share the information that Illumio digs up, he adds.

Solve Document Dilemmas

One of the driving forces behind Web 2.0 is the virtual office—teams of far-flung experts collaborating online to create a whole greater than the sum of its contributors. When Denise Senter-Loyola, a principal with business consultancy Milestone Group, needed to get her virtual marketing and sales team members to collaborate on creating some key documents, she first used a Web-based intranet

laborators of new versions automatically.

When you upload files to your team's private Koral workspace, the service searches them and suggests tags—categories you'll use later to find documents relating to a particular subject. And borrowing from another Web 2.0 buzz technology, Really Simple Syndication, Koral doesn't wait for you to come looking for documents it knows you're interested in. Subscribe to a particular document, and Koral notifies you when it is updated. Subscribe to a team member (or a person with expertise similar to yours), and it notifies you when that person publishes new documents to the workspace.

"Because of the nature of our work, it caught on virally," says Senter-Loyola, who has been using a prerelease version of Koral for about three months and plans to upgrade to access some of the enterprise-level permission features. There is no end user license fee for Koral, but the company

Success will depend on how willing employees are to share the information that Illumio digs up.

—Arthur Hart, Procter & Gamble

for document management. That failed as content grew and folder hierarchies became cumbersome. Soon, team members stopped contributing content. "People gave up because they had to log on and make all of the decisions about categorizing," Senter-Loyola says.

Finding the most recent version of a document required extra work as well—resulting in productivity losses and missed deadlines when team members mistakenly worked from the wrong version of a document.

She found a better take on Web-hosted document management in Koral, a newly released Web-based tool that lets users share and collaborate on documents from any location. Koral is notable because it does much of the heavy KM lifting for you, categorizing documents and notifying col-

laborators of new versions automatically. plans to charge between \$15 and \$45 per user per month for access to the enterprise-level editing and security controls. Koral also integrates with Salesforce.com via Salesforce's AppExchange platform.

Senter-Loyola reports tangible results from Milestone Group's switch to Koral last summer, noting that it cut staff hours and the cost of producing documents by approximately 20 percent on the first start-to-finish project. "The system is actually being used by the organization," she states.

More on KM

For additional advice on **KM STRATEGIES**, see "The ABCs of KM" at www.cio.com/research/knowledge/edit/kmabcs.html.

CIO.COM

KM 2.0 Tools

The new wave of knowledge management software helps you do KM-light right

Tacit Software's Illumio: Web-based information broker matches end user information requests with users in the company who might know the answer. Standard search tools (Google's or Microsoft's) help make it work with a minimum of fuss for end users.

iUpload's Customer Conversation System: Blogging platform helps enterprise customers bring knowledge to light via grassroots participation. Includes enterprise security, workflow and regulatory compliance tools.

Koral: Web-based document collaboration and sharing tool also categorizes documents automatically. Notifies users of updates and new documents published by authors or topics to which they've "subscribed." —L.M.

A Winning Pitch

A KM system that's "actually being used"—this kind of language hints at the skepticism both users and CIOs have had about KM for years. But apps like Illumio and Koral could win enterprise users over one workgroup at a time via viral adoption.

One final bit of good news: Users say the new, simpler KM tools make it easier to justify the investment to your fellow C-level executives.

"It can be very difficult to make a pitch to senior management about why knowledge management is important, because it's not real to them," explains Northwestern Mutual's Austin. Now, she just shows them blog users engaged in explaining their projects to coworkers. **CIO**

Scott Spanbauer is a freelance writer and contributing editor to *PC World*. To comment on this article, go to the online version at www.cio.com/120106.

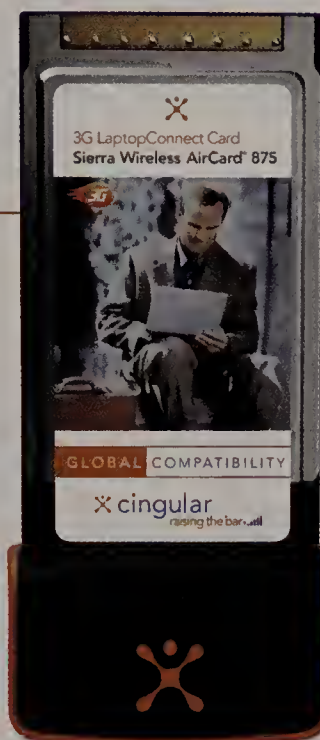


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Cue the Spotlight

How the CIO can achieve a measure of fame and celebrity in four simple steps



You're doing a bang-up job at work. With your data consolidation project and new sourcing strategy, you've reduced operating expenses by 40 percent, and your new PMO has put smiles on the faces of all of your colleagues. It's only a matter of time before your fabulousness becomes known and recruiters start calling with your next dream job. (If you believe that, I have a nice bridge in Brooklyn to sell you.)

The fact is, like most rewards, industry recognition takes some hard work. Yes, if you are the CIO of GM or Dell, recruiters know your name, and magazines, newspapers and conference organizers are beating a path to your door. But if your company is not a household name, you need to take a proactive approach to making a splash.

I spoke to four CIOs who take the concept of strategic self-publicity to heart, and together we have developed four simple steps to worldwide recognition.

1. Branding. Before you can get your name out there, you need to have a clear understanding of just what that name represents. Are you great with customers, a terrific leader, an architecture guru, a manufacturing expert? Knowing your brand will allow you to project attributes that are richer and more powerful than those associated merely with your job.

Last December, Michael Iacona decided he was ready to raise his visibility within his industry. But first the CIO of TMP Worldwide Advertising & Communications thought about what he wanted his name to connote. To focus his thinking, he went through an exercise to identify his personal brand.

Iacona sent a survey to his peers, colleagues and even people he had just met to determine the impression he makes. A sam-

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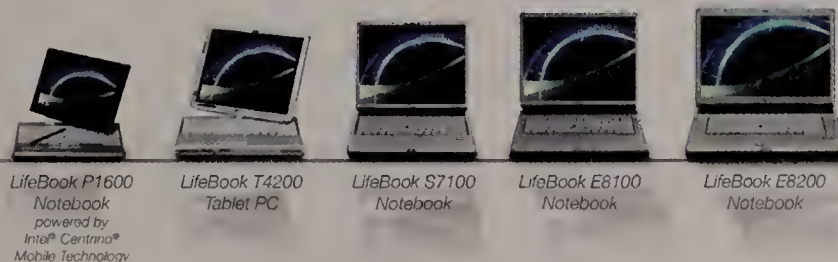
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ple question: If he were a car, what kind would he be?

From the survey results, he learned which five brand attributes best describe him and used them to develop a one-page summary, a personal mission statement and a webpage to advertise it (michael.iacona.com). "This is not about creating an image of who you want to be, but identifying the unique value that you bring," says Iacona. But just like running IT, building your brand is not a onetime project. "This is not something you do once and are done," he says. "Over time, you need to continue to build and nurture your brand."

2. Networking. With your brand in hand, you can nearly see your name up in lights. Well, take a breath; it might make sense to start networking first. This lets you test out your brand, hone it while the stakes are low and meet people who can connect you to relevant editors and conference organizers. "Networking is not just hit or miss," says Sheleen Quish, former CIO of U.S. Can and current CIO-at-Large of Box9 Consulting. "You need a great address book and a plan for growing it. I spend at least 30 minutes a day adding new contacts to my list."

3. Writing. A time-tested way of garnering attention is to write for a technology or business trade magazine. In 1992, Greg Smith, now CIO of World Wildlife Fund and author of *Straight to the Top: Becoming a World-Class CIO*, decided to get published. He was in corporate financial systems at Sallie Mae at the time and had completed a cutting-edge technology project. He wrote an article about it and submitted it to *LAN Times*. The editors teased it on their cover, which led to speaking engagements, more articles, a book and book signings.

Smith's advice: "Take a shot, write an article and submit it to a bunch of publications. Start with a controversial idea and make sure you include practical advice. You want to give readers at least one memorable idea when they walk away."

4. Speaking. For many CIOs, few things are less appealing than appearing before an audience. But it's one of the most effective ways to get known. "Start by tapping into MBA and executive education programs," says Mary Finlay, deputy CIO of Partners HealthCare System and a frequent speaker at industry events. "They are always looking for guest speakers. Also, if you are in organizations, like SIM, you can offer to speak at their events. But reference your membership as you reach out to other events. Conference directors often want to hear from someone who represents an organization."

Once you get the gig, customize your presentation to the audience's expectations, test it for delivery and timing, and connect with your audience. If they like you, word will spread, and you'll be a regular on the speaker circuit.

So, there you have it: You're branded, networked, in print and on stage. Your worries are over, right? Not necessarily, cautions Quish: "Don't blow your 15 minutes of fame all at one time. If you get too much exposure, you can become like stale bread."

The Last Word

Martha Heller responds to readers' comments

Readers told me that they valued the column's advice for getting on the speaker circuit. However, many wanted to learn more about how to make each presentation a success. I recently heard an excellent talk by Rick Davidson, CIO of Manpower. I asked him to share some of his best practices for on-stage success.

"Think of your presentation as a story," says Davidson. "Give it a beginning, a middle and an end." The beginning is the hook, "the part of the talk that ignites the audience's initial interest in the topic." Davidson says the middle is where you allow listeners to relate the topic to themselves and provide them with opportunities to consider what it means to them. The end is a call to action: What am I—or we—going to do about the situation?

As a CIO speaking to a non-CIO audience who will not immediately relate to your experiences, you need to demonstrate that you understand their perspective.

"I spoke to people who work in project management offices and talked about their roles as 'speed bumps on the road to chaos,'" says Davidson. "They decided that I understood them and agreed to listen to me, even though I'm in a different professional role."

Creating an emotional reaction in your listeners—telling a personal story or funny anecdote—will establish a

connection with the audience and keep them engaged, says Davidson. In the talk that I heard, Davidson told a story about how

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when his father retired, his mother made his father stay in the garage all day so as not to disrupt her domestic space. (This gave me a wonderful idea for my husband's retirement one day.)

Davidson's final advice? "Avoid too many messages," he says. "If you overload your listeners, they won't retain anything. Sometimes, all your audience will remember is a picture or a single message. What are the two or three points you want them to take away? If they walk out with those, you're successful." **CIO**

Martha Heller is managing director of the IT Leadership Practice at the Z Resource Group, an executive recruiting firm based in Boston. Reach her at mheller@zrgroup.com.





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Good CIOs, Bad Choices

Smart IT leaders know the key to better decision making is to take a hard look in the mirror and identify what they need to work on to build credibility with the business

After only three years, Tom, a publishing industry CIO, got the boot. It's amazing that an IT leader with such intelligence and years of experience could mess up so badly in such a short time.

Tom's tenure started well: He inherited an IT organization with good relationships and a track record of delivery. However, the department lacked a coherent strategy and a cost structure attuned to the fiscal pressures facing the organization.

Faced with the difficulties of setting strategy in a decentralized business and bowing to his introverted nature, Tom decided that some strategy was better than none and initiated an effort that largely excluded the business. He launched an SOA initiative and a service-based organizational model—changes that were out of line with the maturity of the organization and increased the high IT cost structure.

Good CIOs make bad choices all the time. These decisions usually aren't fatal, but they are painful, and it may take the CIO a while to recover. To help my clients make better choices, I have developed a framework called the CIO credibility cycle.

The credibility cycle helps CIOs foster organizational excellence and strong relationships across the enterprise. It starts with building an IT organization capable of developing good relations with the business. This is achieved by delivering projects on time and on budget in order to realize their business value. Meeting this objective will motivate both business and IT to forge a shared IT vision, strategy and tactical objectives. This, in turn, leads to the building of quality solutions that strengthen the overall organization and, completing the cycle, continues strengthening relationships.

By understanding the credibility cycle and using it to diag-



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nose IS capabilities, CIOs can identify what they need to work on and in what order to build their credibility with the business. The cycle defines what experienced CIOs already know: that to inspire trust, one must accurately assess organizational capabilities and work them in the right order.

In Tom's case, IT had strong business partner relationships and delivery credibility and was starting to be recognized as a lever to create business value. His focus should have been to facilitate cross-divisional discussions regarding priorities, synergies, and cost savings with the goal of gaining shared commitment and the allocation of scarce resources. Unfortunately, Tom's decisions to set strategy alone and focus on SOA and organizational engineering created a cycle of incredulity with senior management ("I can't believe he's doing that!") that led to his departure.

CIOs such as Tom who have been in the role for a while can get stuck in an incredulity cycle and need to step back from the issues at hand to gain perspective. For example, Roger, a manufacturing CIO, discovered that the product engineering group had installed another rogue messaging product on the network. Initially, he readied himself for a painful battle, taking satisfaction that policy was on his side. Fortunately, he sought counsel and realized that policy was the *only* thing on his side. He didn't have the relationships necessary to collaborate effectively on delivering new capabilities. As a result, his business partners felt that to get anything done, they had to go it alone.

Roger realized that a confrontation on this issue was going to make him look like an officious, powerless Barney Fife (remember *The Andy Griffith Show*). Rather than hide behind policy, he decided to view the situation as a chance to build relationships and adopted the posture of partnering with the "early adopter" engineering group to identify user needs and define necessary capabilities and standards.

For new CIOs, it's important to start small and test the elements of the credibility cycle to determine current positioning. Gail, a new divisional CIO, inherited a mission-critical project that was years in the making and way over budget. Gail could have asked for and received a check in any amount she requested, given the initial credibility conferred on a new CIO by management. Instead, she requested funding in stages and broke the initiative into smaller projects to test the capabilities of her organization and its business relationships. In this way, she reduced risk and established a track record for delivery as she and her business partners demonstrated completion of each stage prior to requesting further funding.

Good leaders make better choices by working with—not against—the credibility cycle. By facing the truth, CIOs can focus their efforts and set the foundation necessary for the future. It's uncomfortable to look in the mirror and ask for help—but it's less painful than letting the cycle of incredulity claim another victim.

Reader Q&A

Q: In many organizations, it takes 50 people to agree to a strategic change and only a few to stop progress. This dynamic may be what drove Tom to take action on a strategy he could control. Do you have any insights on gaining strategic consensus?

A: Strategy is defined in the course of day-to-day business. The purpose of a strategy-making process is to capture current insights, identify actions and focus resources on initiatives that will promote the enterprise's objectives. A strategy defined alone may be elegant, but it won't help the organization focus on what should—and should not—be done, because it doesn't have the commitment from those who set priorities and allocate resources.

Strategy is less about the result than the commitment to a course of action (that's why Peter Drucker said, "Strategy is a commodity, and execution is art"). Effective strategy making starts with one-on-one conversations in order to understand a company's competitive positioning as well as the goals and aspirations of the leaders in the organization.

By collecting, framing and playing back this information, CIOs and their staffs can, over time, facilitate cross-functional discussions that result in strategic clarity, focus and commitment. Of course, this process is made easier if they define their strategy-making approach in conjunction with a few of the most powerful, key executives.

Q: What could Tom have done to prevent himself from being booted? If he had such intelligence and years of experience, why was he not given a chance to recover?

A: Tom was given a chance to recover, but he decided to assume a defensive and oppositional posture rather

than reflect on and change his behaviors. He could have prevented himself from being booted if he'd focused on building relation-

ships and facilitating participative decision and strategy making rather than spending most of his time in his office. **CIO**

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Susan Cramm is founder and president of Valuedance, an executive coaching firm in San Clemente, Calif. Send feedback to susan@valuedance.com.



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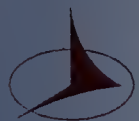
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Even for the largest companies, installing and maintaining a corporate telephone system was quite

simple 50 years ago: When you needed a new phone or a new line, you called Ma Bell and they delivered it to you. The Bell System owned the network, the devices and the links; all they asked in return was payment of a monthly bill based on the number of telephones and lines provided.

In a bow to that business model, Orange Business Services and partner Cisco Systems now offer customers the same, simple way to build and install a fully converged voice and data network. A single monthly charge per device can open the door to the cost-savings and improved productivity of Internet Protocol (IP) communication over converged voice and data platforms. As IT leaders know, IP communication is rapidly replacing separate data and telephone networks in companies with large numbers of distributed branch offices, particularly multinational enterprises.



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 Separate data and telephone networks
 Converged voice and data platforms~~

The financial and productivity gains of deploying Voice over Internet Protocol-based (VoIP) and IP telephony communications – including voice mail, instant messaging, fax, contact center, audio and video-conferencing, Web collaboration and mobility solutions – over converged networks are well documented.

A few examples from Cisco's customer base:

- A 2005 Sage Research study reported that 86% of companies using unified communications said that productivity benefits have grown more than 60% and that mobile workers saved three or more hours per

- NFL Films estimates that the Cisco Unity messaging system saves its employees an hour a day compared to previous methods of accessing multiple message sources.

- Agilent estimates that it saved at least 50% of total minute charges – several million dollars each year – by using a Cisco MeetingPlace voice and data conferencing solution to bridge its North American, Asia-Pacific and EMEA offices.

While the return on investment (ROI) and total cost of ownership (TCO) are very attractive, the capital cost to

returns, making a large one-time investment unnecessary.

Two Companies, One Solution

Communications today is all about convergence, a good example of which is the collaboration of Orange Business Services and Cisco. Each brings its own unique benefits to the partnership, as outlined by Matt Rowan, Cisco's manager for the Go To Market

ered by Cisco. Cisco's unquestioned mastery of the network backbone combined with its more recently developed communications solutions platforms mesh perfectly with Orange Business Services' market penetration – feet on the street – in more countries than any service provider on earth. MPLS combines the intelligence of routing with the performance of switching. It is the foundation technology for totally open

...The good old-fashioned monthly price-per-device returns, making a large one-time investment unnecessary.

week as a result of their new systems.

- A Cisco IP telephone system allowed H.J. Heinz Europe to make employee moves, adds and changes 86% faster than with a traditional PBX. The solution also decreased call hold time by 87%, gained a time savings of 10% for the non-technology staff responsible for managing remote phone systems by centralizing phone management, and realized a 25% productivity improvement by effectively using IP telephony-enabled voice mail.

deploy these unified solutions is often significant, delaying or postponing adoption. To make these capital decisions less painful, Orange Business Services, the new enterprise arm of France Telecom Group (FT Group), offers a simple solution as old as telephony itself: in return for hosting the enterprise network on Orange Business Services servers, they will absorb the costs and spread the expense across many months. Thus, the good old-fashioned monthly price-per-device

collaboration. "Our role is to support Orange Business Services' sales force in every way possible," Rowan says, "and to be their best friend inside Cisco, so that when priorities need to be addressed, they get prompt attention." As he sees it, the principal benefits of the partnership are Orange Business Services' deep understanding of multinational enterprise communications, combined with the Orange Business Services Multiprotocol Label Switching (MPLS) network, pow-

net-based communications, and the Orange Business Services MPLS network is the largest, most ubiquitous MPLS network in the world, operating in more than 220 countries.

Originally designed for installation at large service providers like Orange Business Services so that major carriers of voice traffic could use more of their bandwidth (in addition to the shortest distance) to move information packets, MPLS also allows large com-

panies to centralize resources and to create very robust networks that support disaster recovery and the movement of major workloads across time zones – both critical for global companies. It enables scalable virtual private networks, a key component of enterprise communication, and also helps deliver individual IP services with simpler configurations, management and adds/moves/deletes for both supplier and user. The entire Orange Business Services MPLS network was

Internet – telephones and electricity – was cast aside by desktop IT, making each enterprise a technology island with its own uniquely configured data portal to the world. As happened with other great technology advances, the market took some time sorting itself. Soon, however, data created needed to be shared with co-workers, suppliers and customers, and the inevitable march to universal standards began. The only question was when the existing telephone networks

ger® Express, delivers all-in-one voice and data solutions to small and medium-sized businesses or to enterprise branch locations serving fewer than 240 users.

- **Cisco Unity** unified communications system delivers powerful, integrated messaging including intelligent voice, e-mail, and fax to one inbox. In some cases, installing Cisco Unity has reduced the total number of messaging servers in a single enterprise by as much as 70%. With

sing user needs with features like extension mobility, helping employees stay connected no matter where they work.

Enabling a Global Talent Pool

Thanks to the ubiquitous Orange Business Services network, organizations with branch offices or remote locations almost anywhere in the world can build and install an entire Orange Business Services/Cisco unified communications platform right now. The benefits

The entire Orange Business Services MPLS network was built less than a decade ago using Cisco technology.

built less than a decade ago using Cisco technology. As a result, only Orange Business Services can offer customers a complete Cisco solution from end to end.

What's Inside

To a degree, it's ironic that Cisco is part of this solution, since it was Cisco and other companies responsible for building the IT backbone of the modern world that persuaded companies to install and manage data technology platforms by themselves. The entire organizing principle of the only ubiquitous technologies the business world knew before PCs and the

would join with the data. Orange Business Services and Cisco are making it happen today.

Cisco/Orange Business Services unified communications solutions can be created from a full suite of hardware and software voice systems and applications. There are four basic parts of the platform.

- **Cisco CallManager®** is a software-based call processing system that delivers IP telephony on a converged network. It can replace or work together with traditional PBX systems. Another version, CallMana-

unified messaging applications, Unity can accelerate further server consolidation because the system shares the same directory as Microsoft Exchange or IBM Lotus Domino. Unity also is offered in an Express version for the SMB market.

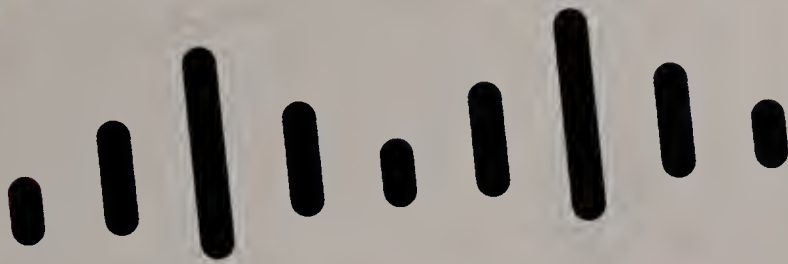
- **Cisco MeetingPlace®** is the third leg of this communications stool, offering rich media conferencing that integrates audio, video and Web platforms to fully enable collaboration between workers from almost anywhere in the world.

- **Cisco IP phones** complete the picture by address-

of this global reach are increasingly obvious today, when talent and production can be almost anywhere, though not necessarily in places that are easy or convenient to visit. Chi Wong, Director of Intelligent Network Services for Cisco's own IT group and the man in charge of connecting all of Cisco's employees and partners worldwide, knows how this works. "Not surprisingly," he says, "we've based our own internal communications systems on our platforms. Cisco has grown rapidly by buying many smaller companies all over the world. We know that the key to unlocking the value



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inside those companies lies in frequent and reliable communications between new and existing team members. Face-to-face contact is not always possible, timely, or affordable, so getting to know each other and sharing ideas in a virtual world are necessities, not luxuries. As true as this is for us, it's equally true for our customers. The bottom line is that we drink our own champagne."

The Rest of the Story

Combining cost savings and productivity improvements from a unified communications system with the reduced capital cost now offered by Orange Business Services and Cisco should make the purchase decision easier than ever. What's left to consider? Infrastructure management, for one.

After the sale, Orange Business Services will manage the installed network if desired. Brad Lewis,

Orange Business Services' Vice President for Telephony Business Development, Americas, points out the benefits: "Who does a customer call for service? Who proactively monitors what's going on with the network? Who makes changes or recommends upgrades? We can perform all of those services and more, reducing the customer's burden," he says.

Some customers hold back based on other concerns about security and wasting the money previously invested in PBX systems. How justified are these fears? While it's true that no Internet worm ever took down a PBX, it's also true that a simple pair of alligator clips can give any intruder access to conversations on a traditional system. The presence of multiple platforms in a communications set offers multiple

ways to intrude into a system; a properly secured unified system protects against both data and voice theft.

Obsolescence is also a way of life in technology, which is why both Orange Business Services and Cisco have a multitude of financial plans to make entering the world of unified communications affordable. The one fact everyone on both the telephony and technology sides of the industry agrees on is this: Someday in the not-too-distant future, the only PBXs will be on display in muse-

ums, not running call networks. Cisco technology installed by Orange Business Services can work with existing systems, allowing a slower migration to full convergence as budgets allow. As for fears of buying into the market too soon, most experts agree that, in the case of unified communications, most of the critical standards are already well established.

**Unified
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It is time to begin taking advantage of the cost savings, productivity improvements, enhanced collaboration and improved operations that unified voice and data networks allow. ■

To Learn More ...

For more information about Orange Business Services and France Telecom, go to www.orange-business.com.

For more information about Cisco systems products and services, go to www.cisco.com.

Fear of Dependency

Small to midsize organizations, using small to midsize vendors, must always be ready to break away and stand on their own two feet **BY BILL REGEHR**



The technology leader's challenge is to provide business tools and solutions as efficiently as possible in a world of limited resources. That's the case no matter the size of your organization, but it's especially true when you're a small to midsize enterprise. Our budgets receive closer scrutiny; even low-cost line items must be justified. Technology staffing is weighed against the cost of staffing the mission of the organization.

At Boys & Girls Clubs of America, we have an IT budget of \$3 million with a staff of 25 full- and part-time employees supporting staff in 27 states. We also have 2,000 technology centers with 20,000 (donated) PCs. As we're a nonprofit, adding to our staff is especially difficult because every year we have to raise the funds to support those salaries.

As one of the fastest-growing major nonprofits in the country, we live in that tense middle ground between the development and support needs of a large organization and the realities of our mid-market budget. To walk this high wire safely, we've adopted a sourcing strategy that takes into account our limitations. In short, we buy when possible, build when we must and support in-house. As corollaries to that strategy, we strive to avoid becoming too dependent on any of the third-tier vendors we generally have to deal with; we routinely leverage platforms and staff across multiple applications, and we take a limited view of business process outsourcing.

Our initial approach to any solution is to see if applications already exist that could meet our needs. We opt for common platforms, leaving exotic solutions to those who are able to make the high-cost investment in the support they require. Any software platform we choose must be interoperable with



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other applications and have the capability to support multiple applications. That leverage is a critical component of any new application business case.

The Vendor Trap

If a suitable solution is not commercially available, we look for an outside developer. This path can be problematic. On the plus side, an outside developer frees us from having to grow the in-house staff to develop the applications. On the other hand, we run the risk of becoming dependent on the developer. For the small to midsize enterprise, finding affordable tier-one or tier-two vendors is a challenge, and many of us are forced to use third-tier players that are, by definition, small and often not as well-managed as their larger brethren.

Let me illustrate with a generic scenario. We award a contract to the low bidder, a small firm with a few key developers. Call it Vendor A. Vendor A is easy to work with and wins over our users by incorporating "nice-to-haves" into the application spec. As new apps are needed, we continue to use Vendor A based on its pricing and the nice relationship we have with it. Indeed, it now feels like part of our organization.

As we grow, the time comes to upgrade some of our platforms. Simultaneously, Vendor A's developers experience a series of challenges, both personal and professional. They become distracted, less reliable and sometimes unavailable. They can't keep up with the work they have and can't meet our new requirements. But they're the only people who understand how their applications work, and we find ourselves depending on a vendor with no resiliency or bench strength.

If you find yourself traveling down this path, stop everything: Find a way to expand in-house, and get third-party support for your critical applications. It may take time (even years) to extricate yourself, but whatever it takes, be diligent about

pursuing a multivendor portfolio. As CIO, it's critical for me to convince the organization how important it is to maintain a healthy degree of independence from

any single vendor. We can't allow ourselves to be victimized by unforeseen disasters or dysfunctional business relationships. In addition, we've learned that periodic code reviews must be completed at set milestones in each development project to ensure both the quality of the code and the clarity of the documentation for the application in the event we will need to support it ourselves.

Why Support Begins at Home

When it comes to supporting applications, we default to in-house maintenance. We must be in control of our own destiny for certain applications. These include CRM, ongoing website development and our central database. In an organization of our size, it's critical that ongoing in-house support be included in initial project budgets. We reduce our in-house maintenance and support costs by requiring each member of our team to support multiple applications.

Last, for a few specialty applications or communications needs, we outsource the entire process. In so doing we are able

We live in that tense middle ground between the development and support needs of a large organization and the realities of our mid-market budget.

to off-load the development, support and delivery of unique applications with the option of bringing them in-house later, if we're able to do so cost-effectively.

The Limits of Outsourcing

Beyond that, outsourcing has a limited role in our IT strategy. While some might argue that business process outsourcing best serves the needs of the small- to mid-market segment, most often these processes support highly specialized and/or unique business solutions, which, in turn, call for highly customized processes. To be sure, there are some processes that might be outsourced, but the financial benefits are often negligible. As I've mentioned, our in-house staff generally perform multiple functions—not with the degree of expertise of an outsourcer's specialized staff, but with enough efficiency to support the needs of the business and at a cost that most outsourcers cannot match. Further, the volumes involved in these small to midsize environments are not sufficient for an outsourcer to justify creating a competency center.

The key point is that it's critical for those of us in the small to midsize space to advocate on behalf of the enterprise in ensuring that the infrastructure and applications are created and supported in a manner that will position the organization for growth with minimal risk. The strategy we choose in sourcing will play a significant role in determining the ability of the business to deliver to its customers. **CIO**

Bill Regehr is CIO of Boys & Girls Clubs of America, based in Atlanta. He is a member of the CIO Executive Council, a former IT executive with Equifax and IBM, and a 2006 Georgia CIO of the Year finalist. To comment on this story, go to the online version at www.cio.com/120106.



Mid-Market Strategies

Bill Regehr will lead a teleconference on **SOURCING STRATEGIES** for practitioners on Jan. 11 at 3 p.m. EST. To register, contact Richard Pastore at rpastore@cio.com.

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ACIO tests Windows, Mac and Linux in search of the next-generation office computer

BY MERIDITH LEVINSON

The Great

John Halamka has a penchant for experiments with new technologies. Next April, the 44-year-old CIO of Harvard Medical School and CareGroup, the hospital system that runs Beth Israel Deaconess Medical Center, will become one of the first humans to have his DNA sequenced and his full genetic makeup posted on the Web.

But as a health-care administrator, he's not solely interested in the cutting-edge. The PCs inside the hospital have to work too. So when Halamka's laptop running Windows XP interrupted several presentations with inopportune software updates, he decided his next initiative would be to determine which desktop operating system—Windows XP, Apple's OS X or Linux—is the most secure, most reliable and easiest to use in a corporate environment. Currently, most desktops in his organizations run Windows.

During the summer and fall, Halamka spent a month each with a MacBook, a Lenovo ThinkPad X41 running a dual-boot configuration of Red Hat Enterprise Linux Workstation and Red Hat Fedora Core and a Dell D420 subnotebook running XP. He judged the three operating systems according to their performance, user interface and enterprise management capabilities. And he tested each platform himself because he wanted to know firsthand what problems users might encounter and get a sense of whether his IT department could easily maintain them. Halamka did not wait for Apple's Leopard or Microsoft's Vista operating systems because they were not released at the point when he had the time for this experiment, and also

he prefers testing established technologies rather than new releases.

Halamka admits to a bias against Microsoft: He thinks the complexity of the Office suite hampers its performance and makes it more vulnerable to viruses and spyware. Halamka is also skeptical of Microsoft's future in creating simpler, more reliable products, given Bill Gates's upcoming retirement and the company's appointment of CTO Ray Ozzie to succeed Gates as chief software architect. (For more about the future of

Microsoft, see "Beyond Vista," www.cio.com/111506.) Meanwhile, Halamka notes the rise of Google and Linux as challengers to Microsoft, as well as Apple's adoption of Intel chips, as signals to explore his options.

"Being a CIO in 2006 is a lot harder

than it was two years ago," says Halamka. Users don't tolerate even three minutes of downtime, he says, and IT budgets aren't growing at the same rate as the demand for bandwidth and storage. "This [experiment] is about making sure industry can do what it needs to do better, faster, cheaper and more reliably," Halamka says.

Reader ROI

- :: Pros and cons of Mac, Linux and Windows platforms
- :: Which desktop OS is easiest for an IT department to support right now

OS experiment



John Halamka, CIO of Harvard Medical School and CareGroup, a \$1.8 billion hospital system, wants to give the 16,000 users he supports the most secure, reliable, easy to use computer he can buy.

A Month on a Mac

CONFIGURATION Intel-based MacBook running OS X with Apple's Safari Web browser, Microsoft's Entourage e-mail application, Apple's Pages 2 desktop publishing system for word processing and Apple's Keynote presentation application.

What he liked: Like many CIOs, Halamka thought Apple computers weren't enterprise class. However, he learned that the Apple Remote Desktop management system offers many of the features IT departments would need to roll out a fleet of Macs, including tools for configuring applications, controlling what software is installed on desktops and applying upgrades.

Another characteristic of the MacBook that helps with IT support and administration is its reliability. Halamka prized the fact that his MacBook didn't crash or freeze once during the month he used it. And his work was never interrupted by automatic antivirus or anti-spyware updates—a frequent annoyance with Windows.

Because Halamka travels an average of four days each month, remote e-mail access is of paramount importance to him as a user. He had easy access to his Entourage e-mail during his travels—once his IT department made a small change to CareGroup's firewall.

Access to internally developed Web-based software was also problem-free because his IT group builds homegrown applications to work with any browser. When he was on the go, OS X switched flawlessly from one wireless network to another, which he thinks makes the MacBook a great tool for mobile knowledge workers. The MacBook never skipped a beat as he went to meetings at Harvard, then CareGroup and even to Starbucks, all of which use different wireless network protocols.

In addition to his CIO duties, Halamka is involved in a number of extracurricular initiatives, such as his chairmanship of the national Healthcare IT Standards Panel. As

part of his work, he gives 150 lectures or presentations each year. Thus, he needs an effective tool for creating presentations. He found what he needed in Keynote, which he says is refreshingly simple compared with PowerPoint.

Keynote doesn't offer all the special effects for which PowerPoint is famous. Consequently, Keynote forced him to focus more on his message than on whether he wanted a sound to accompany each slide change. This is not to say that Halamka's presentations were boring. Macs are known for their multimedia capabilities, and he took advantage of these, incorporating digital audio and video into a lecture he gave on mushroom poisoning.

What he disliked: In April, Apple announced its support for the Windows operating system on its machines. But Halamka found running Windows on his MacBook "slightly finicky."

Mac users have two options for running Windows: Apple's Bootcamp, which requires a reboot each time you want to switch from OS X to XP, or Parallels Desktop, which enables XP to run within OS X but which Halamka found to be problematic when



A Mac Expert Weighs In | By Jason Snell

I'd echo John Halamka's thoughts about running Windows on Mac hardware: Parallels Desktop is definitely the better option, but it has the occasional quirk. Users who buy a Mac should expect to spend most of their time using Mac OS X. For the vast majority of tasks, the Mac-native software will do the job.

Websites that require Internet Explorer for Windows used to be the bane of Mac users' existence, but these days most Web developers are building their apps using Web standards and testing for Firefox compatibility, which generally means they're compatible with the Mac version of Firefox (and sometimes with Safari too).

The article makes Keynote sound like a "light" version of PowerPoint. My experience is that Keynote actually offers far more options (in terms of transitions and slide builds) than PowerPoint does. I can always tell when someone is using Keynote, but that recognition is because of extra effects, not the lack of effects. It might be more accurate to say that Keynote doesn't offer the same effects as PowerPoint.

It's encouraging to see that many of Halamka's complaints are the sort you'd expect from someone trying to make a transition from their familiar Windows operating system to the Mac's somewhat different approach. Although Mac users can rattle off the "Vulcan Death Grip" required to take a screen shot (Command-Shift-3) it's not always obvious to new users how these things work.

—Jason Snell is VP and editorial director of Macworld (Macworld's publisher is a sister company to CIO's publisher).

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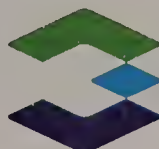
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switching between wired and wireless connections. Halamka decided running Windows XP on his MacBook wasn't worth the trouble. He found the MacBook's software suite to be adequate with one exception: Some Windows-centric commercial browser-based apps, such as a radiology system from General Electric, wouldn't run in Safari. They use ActiveX controls that work only in Internet Explorer.

Although Entourage worked seamlessly for e-mail, he observed some annoying quirks and weaknesses with the application. For instance, he had trouble managing complex recurring appointments. In such cases, he had to use Outlook Web Access on his Mac, at which point he found that none of the advanced features of the Windows version, such as easy scrolling and deletion of messages, works on the Mac. That gave him more reason to ditch Windows applications and tolerate Entourage's few functional shortcomings.

With any new technology comes a learning curve, and the Mac, while known for being easy to use, still requires getting used to. For widespread deployment at CareGroup, Halamka would have to create training manuals for users accustomed to Windows since some of the functions one takes for granted on PCs (such as printing screen shots) aren't obvious on Macs. It took him about three

re:mac
"It's a
superior
knowledge-
worker tool."

—John Halamka

days to get completely comfortable with the MacBook.

Workarounds:

Halamka had to come up with some workarounds to get the MacBook to function properly. Mostly these were straightforward.

For example, CareGroup's Juniper Networks's VPN wasn't compatible with the MacBook, and it crashed the computer the first time he tried to connect. Halamka notified Juniper of the problem, and a day later the vendor developed a patch for the VPN. After that, the VPN worked flawlessly.

Conclusion: Halamka says the MacBook's reliability outweighed any challenges he had with the learning curve. "At the moment, where my role is so much about change management and effectively communicating with everyone who works for me and with my customers, multimedia is very important to me. A MacBook, which is extraordinarily good at managing multimedia, is a superior knowledge-worker tool to XP, which is probably a better development environment," he says.

The Line on Linux

CONFIGURATION Lenovo X41 ThinkPad laptop with two Red Hat Linux operating systems—Fedora Core 5 and Red Hat Enterprise Linux (RHEL) version WS 4 U3. Each system ran the following open-source desktop applications: Firefox Web browser, Open Office (version 1.x on RHEL and 2.x on Fedora) and Evolution e-mail with Novell's Ximian Connector for Microsoft Exchange (Connector functions as a Microsoft Exchange Server client for Linux and Unix desktops).

What he liked: Contrary to what Microsoft says in its "Get the Facts" campaign, Linux can be a stable, reliable desktop operating system. But not all varieties of desktop Linux are created equal. Halamka says RHEL lends itself well to corporate computing environments because the infrequent changes Red Hat makes to the OS are well tested and documented. Thus, corporate IT departments can have the confidence they need to support and administer Linux on the desktop and to know that it won't be the source of furious calls to the help desk.

Fedora, on the other hand, is a lot of work to maintain because it's so frequently updated (see "What he disliked," below). But those updates enable support for the latest hardware—for instance, EVDO wireless broadband cards—as well as rapidly evolving applications such as OpenOffice.

As for open-source office productivity applications, Halamka fell in love with Firefox. The application didn't crash on him once, and he found it easy to use. Halamka liked Firefox so much that he made it the default browser on his MacBook and on the new Windows laptop he tested. OpenOffice worked well for word processing, presentations and spreadsheets. In addition, he did not encounter any serious problems working with Microsoft Office documents.

What he disliked: Although RHEL is easier to manage, it doesn't support the latest technologies and functionality. Sometimes, it doesn't even support the tried-and-true, like USB drives. A potential stumbling block to deployment at CareGroup, Halamka found, is that RHEL doesn't incorporate the drivers that automatically detect





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networks or support new hardware.

Neither RHEL nor Fedora could recognize a USB drive when Halamka plugged one into his laptop. Each time he added one, he had to mount it manually by writing a command. Halamka notes that his Linux engineers, who have been using Fedora themselves, were eventually able to get that OS to recognize USB drives after installing the necessary updates.

Fedora's major problem, according to Halamka, is that the operating system is in "permanent beta." It's standard procedure for open-source developers to constantly release updates and enhancements to Fedora and leave it to the user community to test for interoperability with other applications. Consequently, when Halamka downloaded these updates onto his computer, they often caused other applications to crash. He says figuring out which applications would work and which wouldn't after downloading 200MB of updates every few days "was like spinning a roulette wheel."

On the application side, neither RHEL's nor Fedora's version of the open-source e-mail application Evolution worked well as a client for Microsoft's Exchange server. In two days of trying, Halamka wasn't able to synchronize his Evolution client with CareGroup's Exchange server because Evolution was so unstable. If the process of synchro-

nizing the messages on Halamka's hard drive with the Exchange server was interrupted for any reason (for instance, if the network was slow) the synchronization operation restarted from the beginning. What's more, Evolution frequently locked up and required forced quits, which caused Halamka to turn to Outlook Web Access to sync with Exchange.

The problems that Halamka encountered with the Linux desktop meant he had to build as much as an extra hour into his day for troubleshooting. The tinkering took up precious time. "I don't want to spend my day writing command lines," he says.

re: linux

"I don't want to spend my day writing command lines."

-John Halamka

A Linux Expert Weighs In | By David Torre

Having read of John Halamka's experience using Fedora and RHEL, I was not surprised by the mixed results. About 90 percent of his issues were hardware-related. Coincidentally, the X41 is not listed as officially supported by either Fedora or RHEL on Red Hat's website.

My Dell D600 Fedora laptop has the same network card as Halamka's X41, yet I always achieve network connectivity immediately. As for USB drives, my laptop happily recognizes my Cruzer Micro with every insert.

However, in the business world, end user perception plays a key role in acceptance of new technologies. I couldn't agree more with Halamka's opinion: If it is to be successfully deployed on end user systems, Linux must be able to function with as little tweaking as possible.

It's the hardware companies such as Dell or Lenovo that will put the final seal of approval for Linux support on their machines. As a consequence of having many variations of Linux, hardware vendors will likely pick a small handful of Linux OS versions to officially support. If you work in an organization where support and compatibility are not optional, then you'll need to choose one of the officially supported distributions from your hardware vendor. However, the beauty of Linux is that you can also opt for the "some assembly required" approach.

I would recommend using an OS more suitable to desktops such as Ubuntu or Linspire, as opposed to the more server-oriented distributions such as Fedora or RHEL. Halamka could also consider a non-Linux alternative to Microsoft Windows such as FreeBSD, Skyos or Haiku.

-David Torre is the founder and CTO of open-source consultancy Atomic Fission.

Workarounds: Halamka couldn't connect to CareGroup's corporate network the first time he tried doing so running RHEL. The OS didn't quickly recognize the wired connection or have the drivers for his flavor of wireless connectivity. One of his Linux engineers told him how to manually activate both the wireless and wired connections. That seemed to solve the problem for the wired connection, but he had to activate the wireless connection each time he wanted to use it.

Conclusion: The Linux OS—at least the RHEL or Fedora versions of it—is not ready for prime time. "I never got to the point where if I had to give a speech, I could open the lid of my laptop, launch my presentation and know it was going to work," Halamka reports.

For the Linux desktop to become practical and affordable, he adds, hardware manufacturers will have to configure Linux software for specific machines (as Lenovo is doing for its T60 machines). He says that having one of these companies custom configure the operating system to a specific piece of hardware would prevent some of the problems he ran into and reduce the amount of time IT staff spend configuring hardware and software. Meanwhile, he's not giving up on his quest for a reliable Linux desktop OS. He plans to test-drive other Linux OSs, such as Debian, SUSE and Ubuntu.



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Making Windows Work

CONFIGURATION Dell D420 subnotebook running Windows XP with Microsoft Office, Internet Explorer and Firefox

What he liked: Because Windows is the top-selling operating system, new hardware such as GPS modems and EVDO wireless cards are always developed first for XP. So Halamka rarely worries whether his computer is going to recognize a new device or network. For example, one day in September, just as he was about to start a two-hour lecture using the Web, he realized the network cable in the room wouldn't reach his laptop. Rather than move his computer to an inconvenient spot, he fired up the wireless broadband connection. "I was able to get myself out of a jam because so much is available for XP," he says. "Monopoly does generate interoperability."



What he disliked: The drawback of Windows' widespread interoperability is that Microsoft does not control the hardware its software runs on. And so, figuring out what driver you need to enable certain functionality can be confusing. For instance, when Halamka tried to connect his laptop to Care-Group's wireless network, the wireless driver that came with his Dell didn't work properly. He wasn't sure if Dell or Intel would have the fix he needed. Although he found a patch on Dell's website he had to go to Intel's for the most updated one.

"Users have to be pretty savvy to track down drivers to support this stuff," he says. In the corporate setting, systems administrators do most of this searching—part of what gives Windows its reputation for being time-consuming to manage.

Workarounds: Having used XP since 2002, Halamka has noticed that the more applications he installs, the slower and more unstable the OS becomes. So he's keeping his software stack simple by installing as few additional applications as possible—and primarily Microsoft branded software at that.

He also created two separate log-ins: one with administrator privileges, and another which he uses daily. The user-only log-in prevents websites he visits from downloading ActiveX controls (which can introduce software conflicts and hardware incompatibilities) and prevents automatic downloads of software updates. By taking those steps, Halamka says, he's achieved "a version of XP that actually hasn't crashed in 30 days," he says.

Conclusion: Halamka says it's possible to run a secure, stable and reliable version of Windows provided you configure XP properly and don't make any changes to it. "You have to have a really locked down environment."

Maintaining a locked-down desktop has worked out so far, though it requires accommodation by his colleagues. For

A Windows Expert Weighs In | By Roger Kay

John Halamka has hit on Microsoft's biggest advantage: its dominance in the software industry. Windows' universality in the corporate world is what makes it so sticky. Companies want their applications and documents to be compatible with those of their partners, suppliers, customers and colleagues. They also want their computers to be able to read files created 10 or 20 years ago. Microsoft offers such flexibility. It's hard to replace a computing environment that provides that level of compatibility, even if it is bloated and buggy.

Further fueling Windows' universality in the corporate world is, as Halamka points out, that so much new technology is developed to work with it. That's because software developers are always after the most seats. When I worked for a software developer, we loved the Mac, but we built applications for Windows because we stood the greatest chance of making the most money.

I also share Halamka's criticism of too much complexity in Microsoft software. One of my issues with Windows is how chatty it is. It's always talking to you, telling you that your antivirus software needs to be updated, asking you if you want to try a program from a partner, telling you that your save function hasn't been executed properly. Fortunately, you can shut off some of those features. My opinion is that all OSs tend toward bloat. The good news is that Vista, which I've been testing, dances quite agilely for a fat man.

I laud Halamka's efforts to keep the software stack on his machine simple. That's good discipline if you can manage it.

—Roger Kay is president of consultancy Endpoint Technologies Associates.

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instance, Halamka decided not to use Visio for creating or viewing diagrams (even though Visio is a Microsoft product) because it includes dynamic link libraries that cause instability and conflicts with other applications. And so he asks colleagues to send him a .jpeg of whatever Visio files they want him to look at. He realizes he may have to add Visio eventually. But he's still going to try to keep his applications to a minimum.

For the user community at large, however, controlling the desktop isn't realistic. In the hospital, which has to abide by government security regulations, users are more willing to accept limits. But it's futile for Halamka to dictate what the 8,000 Harvard Medical School faculty members he supports can use on their desktops.

re: windows
"Monopoly
does generate
interoperability."

—John Halamka



Moving Toward **Macs** for the **Enterprise**

Halamka concluded that his dream machine is a Dell D420 notebook that runs OS X. Unfortunately, such a machine doesn't currently exist out of the box.

He prefers Dell's hardware because it's lighter (3 pounds versus the MacBook's 5) and runs cooler. But he so prefers OS X's security, reliability and simple user interface over that of XP that he's keeping the MacBook for personal use. However, until Apple develops a lighter laptop or decides to license its software for other machines, Halamka is sticking with XP for professional use.

Nevertheless, Halamka did take steps toward deploying Macs more widely. While 50 percent of desktops at Harvard Medical School are Macs, Beth Israel Deaconess employees used only PCs. Now Halamka has changed the hospital's purchasing policy to allow Macs, with the understanding that he doesn't yet have enough Mac experts on his staff to support them fully.

At Harvard Medical School, which has a separate IT staff and different purchasing policies, Halamka has promised Mac users the same level of service and functionality to which Windows users are accustomed. For instance, he bought Mac servers to alleviate problems Mac

users at the medical school had accessing their centralized storage.

Meanwhile, Halamka says he's going to monitor Apple's Leopard OS, which is scheduled for release in the spring. If Leopard offers better administration tools than the current version of OS X and is more tightly integrated with both Outlook and Exchange, he might initiate the broader use of Macs—especially, he says, if Vista "turns out to be the beast it could be."

"I used to think that the Macintosh was something used by free spirits just to be different," he says. "Now I realize the Mac has such superior human factor engineering that it's used by people because they can be more productive." **CIO**

Senior Online Editor Meridith Levinson can be reached at mlevinson@cio.com. To comment on this article, go to www.cio.com/120106.

More on Macs, Linux and Windows

For an expanded discussion of CareGroup CIO JOHN HALAMKA'S OS EXPERIMENT, see the online version of this story. Find it at www.cio.com/120106.

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An exclusive MIT survey maps the evolution of IT architecture and explains why you can't skip any steps

ENTERPRISE ARCHITECTURE

In 1999, and addressing any potential Y2K flaws in all of State Street's computer systems consumed the giant financial services provider's IT attention. But despite the tremendous focus on making sure that "00" would be interpreted as Y2000 rather than Y1900, David Saul, then systems software manager and Y2K remediation lead at State Street, realized something else. All the remediation projects were connected, and to ensure that any Y2K-related change in application A would not cause problems for application B, the project team needed to understand the relationships among applications and all of their inputs and outputs.

For example, State Street's applications use reference data to process credit transactions (the currency, the exchange on which the trade is made, and so on). Because this data is used across all applications, it made sense to have a team to handle it independently from the specific financial applications that drew upon it. At the time, most applications handled their own reference data rather than relying on

a separate, common service. Recognizing the value of common services, State Street formed an Office of Architecture (which Saul has headed ever since) to create the architectural environment for them. "It was a natural progression from there to delivering reference data as a service to today's service-oriented architectures," he says.

The SOA approach aligns software and data services directly with busi-

ness processes so that specific services can be reused and mixed and matched as needed. That lowers technology development costs and improves the company's ability to offer new or improved services to customers and supply chain partners.

And that's all good. But even if an SOA is what your enterprise needs, you may not be ready to deploy one. That's one conclusion from a pair of recent MIT Sloan Center for Information Systems Research (CISR) studies, "IT Architecture as Strategy" and "IT-Driven Strategic Choices," both based on a series of research projects involving 456 enterprises between 1995 and 2006. The CISR research identified four distinct architectural stages—silos, standardized IT, standardized business processes, and business modularity—that both the business units and IT must pass through before SOA's benefits can be fully realized. And no one gets to skip any stages. At best, you can speed up the process. For the CISR researchers, this conclusion

was unexpected, says Jeanne W. Ross, the studies' principal research scientist. "But when we tell people that, they say, 'Oh, *that's* why it's not going that well.'"

And because the vast majority of enterprises are in the first or second stage (and, again, they don't get to skip), it will be years, perhaps decades, before SOA is widely adopted in an effective way, Ross says.

CISR's research provides a road map for both the business and IT to follow so that they can avoid fruitless diversions, not get discouraged during the long haul and understand what success should look like when it's finally achieved. Happily, Ross notes that each stage comes with its own benefits, so there are short-term returns on the long-term architectural investment.

Each stage takes about five years to get through, says Ross, though that period could shorten as more companies go through the process and learn what missteps to avoid. "Seven years ago, there were no architectural practices at the research firms," notes State Street's Saul. Today's enterprises, he says, don't have to feel their way as much.

The good news, according to Ross, is that your competitors are likely to be at or near the same architectural maturity level as you are, and they can't leapfrog any stages either. Those that try to could waste time and effort deploying business processes and IT infrastructure that they're not ready to use.

Rather than attempting great leaps forward, Ross suggests that CIOs should partner with the rest of the business to move their enterprise forward incrementally, gaining expertise, building buy-in and reaping the ROI that will sustain long-term maturity. Having the architectural maturity framework in mind during that evolution gives CIOs and their business peers a way to evaluate if they're really progressing, she says.

The SOA Buzz

CIOs can't avoid SOA today. Research firms and the business press trumpet its ability to make companies agile and efficient. Vendors apply the label, often speciously, to help sell their products. No matter where CIOs turn, they hear the same message: You *must* deploy an SOA—*quickly*—or be

at a competitive disadvantage.

Indeed, there are advantages to adopting the SOA approach even if you're not at the stage at which CISR says enterprises can reap its full benefits. "If you deploy SOA-based technology before your organization is ready, you might still get a more efficient integration system in IT," says Ron Schmelzer, a senior analyst at SOA consultancy ZapThink. Implementing SOA concepts, even in a limited fashion like creating Web services, also "helps create a common vocabulary so the business and IT groups start moving in the same direction," notes Judith Hurwitz, CEO of the consultancy Hurwitz & Associates.

But while you might reap some posi-

The **PATH** to ENTERPRISE ARCHITECTURE

How it was discovered and mapped

Since 1974, the Center for Information Systems Research (CISR) at MIT's Sloan School of Management has been studying how companies generate value from information technology. As part of that research, we developed a case study in 1995 of Johnson & Johnson's

efforts to develop shared infrastructure services for subsets of its 170 autonomous business units. We noted that J&J's infrastructure had been developed to support the way it traditionally had done business—not the way it wanted to do business going forward. We quickly learned that J&J was not alone. And that realization led us to the concept of enterprise architecture, one we decided to explore in depth.

Over the next 10 years, we developed case studies on about 50 IT infrastructure transformations, ranging from technology standardization to ERP implementations and e-business initiatives. Every company we studied faced essentially the same problem: The business could not function as it wanted to unless IT created new capabilities, but IT could not implement those capabilities until and unless the business changed.

We came to understand this dilemma as the challenge of enterprise architecture, and we sought out companies that were moving aggressively to resolve it. We found that companies such as Cemex, Delta Air Lines, Dow Chemical, MetLife and UPS had each embarked on a journey to re-architect their enterprises and build IT capabilities around that new architecture. Switzerland's IMD joined the research and let us extend the reach of the study to European companies such as ING Direct, Toyota Motor Marketing Europe and Schindler.

From those nearly 50 case studies, we developed a model for architectural maturity that we tested in 2004 by surveying 103 companies around the world. The survey provided further evidence of both the existence of architecture maturity stages and the value of architectural maturity. The findings from our case study and survey research are highlighted in the accompanying article and in our book, *Enterprise Architecture as Strategy: Creating a Foundation for Business Execution*.

—Jeanne W. Ross, Peter Weill and David C. Robertson

tives from a premature SOA deployment, says Jim McGrane, former CIO (now VP) of paper manufacturer MeadWestvaco, you might harvest some negatives too. "Flopping a Web services interface on a bad process just makes it more visible," he says.

Understanding why your organization may not be ready for a complete SOA approach will help the CIO figure out what SOA-approach benefits can be gained at his organization's current maturity level.



From Silos to Business Modularity

Even if they don't know it, Ross says, most successful enterprises are moving through the matu-



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rity stages that CISR's research has identified. Today, most companies are in Stage 2: standardized technology. Throughout the 1990s, it became clear that Stage 1—business silos with IT efforts focused on specific departmental needs—created a mountain of overhead and support requirements. That level of complexity, which came to characterize the early days of IT, could never support enterprise growth (not to mention the fact that it cost lots of money). This led most enterprises to adopt standard platform technologies wherever possible, using just one or two PC configurations, a standard database technology for all departments or the same type of hardware and OS for all servers.

The third stage, standardized business processes, is where many advanced enterprises are today. Here, the business is viewed holistically, and IT and business leaders see themselves as partners.

The fourth stage, which very few enterprises have entered to date, is business modularity. Here, business processes and their supporting technologies become modules that can be reused for efficiency and recombined for agility—the quintessential promise of SOA. Organizations know which processes should be local to specific business units and which should be standard across the enterprise—and the architecture supports the mix.

“Going from Stage 1 to 2 is not rocket science,” says McGrane. Although it requires real effort, the tactics and strategies for successful platform standardization are now well-known by vendors, consultants and IT staff. But “going from Stage 2 to 3 requires organizational change and business accountability,” McGrane says, “and that’s a lot harder.” And the move to Stage 4 is even more difficult. “It requires a redefinition of what you’re doing as a company,” he says.

Getting from Stage 1 to Stage 2 is mainly a job for the IT department, with the promised ROI of cost reduction. Moving to Stages 3 and 4, however, requires a fundamental shift in focus—from how IT can fulfill immediate and defined business unit needs to developing business processes that can be delivered through flexible, modular IT services, with the promised ROI of enterprise agility.

“The point is not just to manage

costs but to shift the enterprise. If the CEO and CFO don’t understand this, you’re dead,” McGrane says.



Platform Sanity

In Stage 1, the pressure to move from silos to standardized platforms is easy for the CIO to identify. The business complains about escalating IT costs and longer delivery schedules as IT wrestles with the ever-increasing complexity of all the pieces it must manage and integrate. But standardizing an enterprise’s platform is not as simple as it may sound. The first step is deciding what exactly should be standardized.

“It makes sense to standardize at the network level, but it doesn’t make sense for a specific business area,” says State Street’s Saul. For example, a common storage net-

work and e-mail system both reduce cost and improve information sharing. But traders working with stocks may need different application functions than traders working with derivatives, even if many of the underlying functions, such as client management and reporting, are the same. “Today, our enterprise architecture exists in layers, starting from things like the network, hardware and operating systems, and continuing up through middleware and databases until it reaches the applications. The differences across businesses may be quite slight and restricted to the application layer. The idea is to standardize on functions wherever possible but not to force-fit them at the business level. That way designers can concentrate on business services that give us an advantage while reusing core components,” Saul says.

HOW I.T. WORKS IN EACH ARCHITECTURAL STAGE

	STAGE 1 Business silos	STAGE 2 Standardized technology	STAGE 3 Standardized processes	STAGE 4 Business modularity
IT capability	Local IT applications	Standard technology platforms	Enterprisewide standardized processes or data	Plug-and-play business-process modules
Business objectives	ROI of local business initiatives	Reduced IT costs	Cost and quality of business operations	Speed to market, strategic agility
Funding priorities	Individual applications	Shared infrastructure services	Enterprise applications	Reusable business processes
Key management capability	Technology-enabled change management	Design and update of standards; funding shared services	Core enterprise process definition and measurement	Management of reusable business processes
Who defines applications	Local business leaders	IT and business unit leaders	Senior managers and process leaders	IT, business and industry leaders
Key IT governance issues	Measuring and communicating value	Establishing local vs. regional vs. global responsibilities	Aligning project priorities with architecture objectives	Defining, sourcing and funding business modules
Strategic implications	Local/functional optimization	IT efficiency	Business operational efficiency	Strategic agility

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The next issue is figuring out how to handle the change from the existing systems to the new standards. Not only must you actually transition your technology, you also must transition your users. And, Saul notes, you're bound to come across noncompliant technologies that are doing an important job and doing it well. State Street started an architectural committee early in its standardization effort to address these issues. When resolving standardization priorities, the committee started with the business objectives, ensuring that IT didn't inadvertently standardize away a business-critical technology. The committee approach planted the seeds for business-IT cooperation that would be needed in Stage 3 a few years later.

A more subtle issue in making the shift to Stage 3 is the human factor, says John Petrey, executive VP and CIO of TD Banknorth, a banking and insurance firm. Stage 1 businesses and their employees are focused (understandably) on solving their specific, individual problems. To problem-solvers, standardizing technologies may mean a loss of control and perhaps even a loss of optimal solutions. "It takes time for people to realize that to get the benefits everyone is after, you have to share more things," Petrey notes.

Realistically, this cultural shift takes place in spurts. "You don't wake up one day

and it's a different culture," he says.

Companies also need a measure of resolve to succeed. Often, a crisis makes it clear why change is necessary. Other times, company leaders have the charisma or force of personality to effect the change. At TD Banknorth, Petrey implemented a ruthless approach to standardization for acquired companies. "We do rip and replace," he says. That way, he says, platform heterogeneity can't get a toehold in the organization.



Collaboration Time

As an organization gets its platforms standardized, the next logical place to look for efficiencies is business and IT processes. For example, chemical manufacturer Celanese saved about 40 percent of its IT costs through its four-year standardization and consolidation effort, notes CIO Karl Wachs, in which the company rolled seven data centers into one and 13 ERP systems into one. The consolidation began in Stage 2 as a platform effort and was completed in Stage 3, when the company could begin the business-process standardization needed to run the company on one ERP system.

Understanding business processes sufficiently to standardize them is no small feat, says Wachs. It requires intense collaboration between IT and the business. But the effort helps both groups understand that

different business units use many of the same core processes. "Our base chemicals unit works differently than our plastics groups, for instance, so they have different sales processes and thus different implementations of CRM," Wachs says. "But, in reality, they are different flavors of the same functionality, so we could put all the functions in one system and make them configurable for each of the business lines."

To do the deep analysis required to come to these realizations, you need ongoing metrics, Wachs says. Without them, you can't assure proper governance of your services, much less of your business processes. ZapThink's Schmelzer points out that governance in this case means both the policies for specific business and IT processes and the system by which the enterprise decides how it creates and deploys its business and IT systems, such as architectural review requirements and funding priorities.

Moving from the second stage to the third can produce subtle benefits. At TD Banknorth, the business units needed more sophisticated products to compete. That required IT to keep improving its abilities and levels of sophistication. At the same time, cost pressures require the CIO to deliver these more sophisticated tools with the same level of resources. This pressure leads to an optimization

THERE'S NO PLACE LIKE HOME

Enterprisewide architectural transformation should begin within IT

Starting your forays into more mature architectural stages within the IT department itself lets you test approaches to make sure they work and reduces the chances that a botched effort in a business unit could kill further evolution, says Jim McGrane, former CIO of Mead-Westvaco. Such inside-IT efforts also give CIOs

the proof of concept you need to gain business buy-in. Plus, starting within IT disarms the common complaint that "CIOs like to change everyone else's processes but their own," he says.

Merck is also taking this tack, says Joe Solfaro, executive director of information management. "We're going

to work our way from the inside out," he says. At Merck, IT is using an integration platform to unify the messaging architecture at the company, which at first seemed to be a very IT-focused efficiency gain. But the effort is forcing IT to change its own internal operations and provides a natural interface with the business.

"Layering information into a single bus gives us access to information that we know the business will want, such as process management, and it gives us more visibility into business processes," Solfaro says.

Approaches such as the Capability Maturity Model for Integration (CMMI) and IT Infrastructure Library (ITIL)

are good process methods to help IT transition to Stage 3, note both McGrane and Solfaro. (For ITIL best practices, see "ITIL Power," www.cio.com/090105.) "They help focus the organization on a process basis, and they force you to determine the value of services and to run like a business," McGrane says. —G.G.

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approach, bringing the enterprise into the third architecture stage.

It is at this third stage that *architecture* begins to mean more than IT infrastructure. Data architecture, IT governance, Six Sigma process optimization and business-IT alignment become critical aspects of the enterprise architecture, with the focus of IT shifting from simply managing the technology plumbing efficiently to contributing to the business's operational excellence. Efficiency remains important, but its goal has changed from saving money for the sake of reducing costs to freeing up resources that can be used to grow the business, says Petrey.

For example, TD Banknorth began paying much more attention to data architecture as it entered Stage 3. "You need to put real resources into evolving and planning it," says Petrey. That involves ensuring standard definitions of data to make it easier for multiple systems to work with the same data and interpret it correctly, as well as to be able to glean patterns that help better serve customers.

TD Banknorth has designated IT staff who entrench themselves in the lines of business and act as relationship managers with their business colleagues to ensure true IT-business alignment.

Although TD Banknorth has standardized its technology platforms, it didn't always enforce its architectural standards on the applications it bought or created. "It happened because of the rapid growth—we were most concerned with just getting something in," recalls Petrey. "We've recognized that we committed these sins in the past and that it reduced our service levels and interfered with our ability to move the company forward." Petrey is now working to make those architecturally deviant systems fit his new IT architecture, so TD Banknorth can continue to mature into Stage 4. And stricter governance is now in place to make sure it doesn't happen again.

A focus on architecture can also lay the groundwork for future benefit, says Joe Solfaro, executive director of information management at pharmaceutical maker Merck. Much of the company's IT efforts are focused on standardizing its platforms, but it's also mapping its business processes

and data architecture so it can be more agile once it has a more cost-effective platform on which to operate. The company began two separate data-standardization efforts several years ago but more recently brought in enterprise architects to develop a common data architecture to underlie both. "Even if the systems have tactical differences, they'll still support the same stra-

EA CHANGES EVERYTHING

As the architecture changes, so does the CIO role

As an enterprise evolves through the various stages of architectural maturity, the CIO role evolves along with it, says Jeanne W. Ross, the principal research scientist at the MIT Sloan Center for Information Systems Research. In Stage 1 companies, the CIO's job typically is focused on maintaining the technology plumbing. In Stage 2, the CIO needs to play a more strategic role to coordinate the shift to a common platform and its effect on the enterprise. Sometimes, as organizations go through Stage 2, "there's a weird tendency to bring in a non-IT person" Ross observes. As the technology stabilizes in Stage 2, process issues come to the forefront and a technology-focused CIO may seem less able to handle them, according to Ron Schmelzer, a senior analyst at SOA consultancy ZapThink.

The CIO role begins to cross organizational boundaries in the journey to Stage 3. Ironically, as an enterprise moves into Stage 4 and business leaders gain more control over the deployment of IT services, the CIO role can again become more tactical, says former MeadWestvaco CIO (now VP) Jim McGrane who, seeing that shift begin at his own company, has decided that's not a job he wants. (He left his position in April of this year to focus on other areas.) But losing the policy dimension of the CIO role is not inevitable, argues Judith Hurwitz, CEO of the consultancy Hurwitz & Associates. "You can focus on innovation because the operational efficiencies achieved [by SOA] give you that time," she says.

As enterprises move through latter maturity stages, Ross argues that IT "should be part of something bigger, such as shared services, operations or finance," shedding its role as a mere technology provider. In that evolution, the CIO becomes the head—or a leader—in a more broadly defined operation. At financial services provider State Street, for instance, IT and operations have merged. Pharmaceuticals company Merck has made IT part of shared services. And paper maker MeadWestvaco has recently done the same.

But it's the enterprise's view of the individual CIO's abilities that really matters in determining what role he will play in a Stage 4 organization.

Schmelzer notes that many companies have a VP of marketing and sales, a role that combines two very different functions, while other companies have a separate VP for each. IT's role is even broader, he notes, combining architecture, design, and integration and operations. Few CIOs will be strong in all three; some will be strong in only two. Management may view IT as a discrete function or as a subset of a greater services organization.

But no matter the organizational structure, the CIO needs to be as knowledgeable about the business as the technology.

—G.G.

tegic direction," he says. That means easier data management that will ultimately support a full-blown, Stage 4 SOA.

Culturally, Stage 3 requires both IT and business staff to let go. "You have to stop being tactical. You need to trust others to manage the details," Petrey says. Some of that shift occurs in moving from Stage 1 to Stage 2, but in Stage 3 the letting go is more



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difficult because now very different types of people—IT and business—must depend on and trust each other. And as with the change from Stage 1 to Stage 2, the shift to Stage 3 happens over time as the organization sees the ROI of the new approach and buys into the transformation.



Business Modularity

Very few enterprises are at Stage 4. They account for just 6 percent of the roughly 450 companies CISR surveyed.

Still, CIOs in the latter part of Stage 3 can already see how Stage 4 might look. At Celanese, CIO Wachs says parts of his organization are in Stage 4, focusing on modular processes that can be easily managed within an enterprisewide architecture. “Companies can be agile only if they can turn specific functions on and off,” Wachs asserts, and that requires understanding what the functions are, where they are used and what they affect. That in turn requires having an architecture designed for both flexibility and consistency, he says.

State Street also believes it is in the beginning of Stage 4, says Saul. “We know we’ll have to get the IT people better at understanding business processes and at communication,” he says. “The lines between IT and business are blurring,” he continues, “and it’s clear that someone will have to manage both.” For some companies, that means IT may become part of a shared-services effort. (For more on the role the CIO will play in this type of organizational structure, see “EA Changes Everything,” Page 74.)

Less clear is what a mature Stage 4 organization will be, what it will look like, says MeadWestvaco’s McGrane. “The understanding of how to use IT for agility and game-changing things versus incremental improvements is just starting,” he notes. And he’s not sure the enabling technologies are really there yet. One thing McGrane is

sure of: “You can’t move to Stage 4 until the entire enterprise has achieved Stage 3, because Stage 3 sets up the process orientation necessary to view the enterprise as modules, as Stage 4 requires.”

A Journey, Not a Place

While it’s tempting to think of each stage as a place to arrive at, a truer way to see it is as a transformative process with the enterprise gradually transitioning from one stage to another, CISR’s Ross says. That’s because the volume of change is immense, and more important, people must change along with the technology. (For more on managing change, see “The New Science of Change,” www.cio.com/091506.) That’s why CIOs should promote incremental deployments and promise incremental value, both to ease the impact of change and to nurture management’s enthusiasm for the effort, says Celanese’s Wachs.

In fact, because of the legacy of mergers, different levels of business need and buy-in, or external forces such as regulation, companies often find that they’re in different stages simultaneously. For example, at Celanese, the HR system is still in Stage 2 because of payroll requirements, while other parts of the company are entering Stage 4, says Wachs.

No matter the pressure to improve enterprise efficiency and agility—Today! If not sooner!—companies, unlike the X-

The endpoint is much less important than the continuous improvement you gain. You need to get a little better every day. It’s not about how to get to Stage 4.”

—James W. Ross, MIT CISR Senior Fellow

Men, cannot leap over stages in their evolution, says CISR’s Ross. Each stage lays the technological, procedural, cultural and behavioral foundation for the next. The impossibility of skipping stages holds true even in companies where one entity is ahead of the others. For example, in 2002 McGrane considered Mead to be at Stage 3, but then the company merged with Westvaco, which was at Stage 1. As CIO of the new MeadWestvaco, McGrane had to bring the newly acquired parts of the company through Stage 2 before moving them to Stage 3. Now, the unified organization is moving closer to the same maturity level.

Enterprises should also understand that architecture is never done, says ZapThink analyst Schmelzer. “The idea is to continuously adjust the service—not necessarily the implementation—such as composing two finer-grained services into a more composite one or vice versa,” he says. Typically, CIOs don’t have those skills, so they should have a chief architect or architecture team reporting to them, Schmelzer advises.

However an enterprise manages its architectural evolution, it must remember that the journey is the reward. Says CISR’s Ross, “The end point is much less important than the continuous improvement you gain. You need to get a little better every day. It’s not about how to get to Stage 4.” **CIO**

Galen Gruman is a frequent contributor to *CIO*. To comment on this story, go to the online version at www.cio.com/120106.

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_INFRASTRUCTURE LOG

_DAY 25: They're in the cafeteria!! AAAGGGHHH!! These useless things can't work with each other. They aren't scalable. They aren't responsive. And you can't adjust new capacity on the fly. The horror.

_So many of them, I have to eat standing up. My arches are killing me. And I got avocado on my shirt.

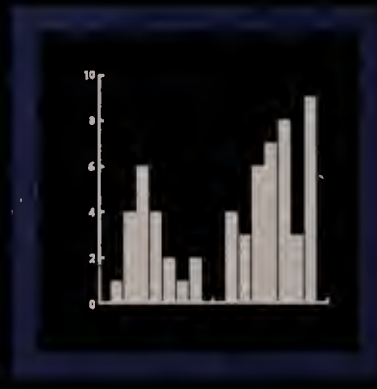
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_I can eat my turkey-avocado sandwiches in peace again. Mmmmm...



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■ *How to Measure the Value of Vendor Relationships* BY MERIDITH LEVINSON

Reader ROI

- :: Why vendor management is a strategic activity
- :: How to drive innovation through good vendor relations
- :: How to group technology providers by strategic importance

Can this relationship be saved? That was one of the questions in the mind of Mike Hmel, FedEx Ground's senior vice president of IT and CIO, as he prepared for a meeting with Sun Microsystems.

The IT department at FedEx Ground was struggling to develop a transportation management system (TMS) using what was a new technology in 1998—Sun Microsystems' Java software. The TMS would help determine the most efficient and cost-effective way for the \$5.3 billion company to move its tractors, trailers and dollies among its 29 hubs and more than 500 pickup/delivery terminals. As such, it would be the backbone of the Pittsburgh-based FedEx Corp. subsidiary.

But the multimillion-dollar development effort was "stuck in the mud," according to Hmel. Implementing the software was far more complicated than Hmel had expected. Java was more than a programming language: It was a technology that would have

Vendor Management

a profound impact on FedEx Ground's IT infrastructure, requiring a shift from two-tiered client/server computing environments to multitiered Web-based computing environments. It also demanded a new approach to application development. What's more, FedEx Ground's IT department wound up having to buy more products to support the development of the TMS. Consequently, the relationship between Sun and FedEx Ground grew strained, which didn't make resolving the problems any easier.

Tired of the impasse his company had reached in its development efforts, Hmel was meeting with Sun to address the issues and come up with a plan for completing the transportation management system. "Sun was a trusted business partner at the time. We had a lot of their equipment, people and services at FedEx Ground," says Hmel. "We had some problems with their hardware, and they had problems supporting us with the TMS. We made a real effort to work with Sun, but [the relationship] never got better."

Eventually, the TMS was completed, and it saved FedEx Ground \$100,000 a day in staffing and administrative costs and helped shave a day off the time it takes the company to move shipments in many of its shipping lanes.

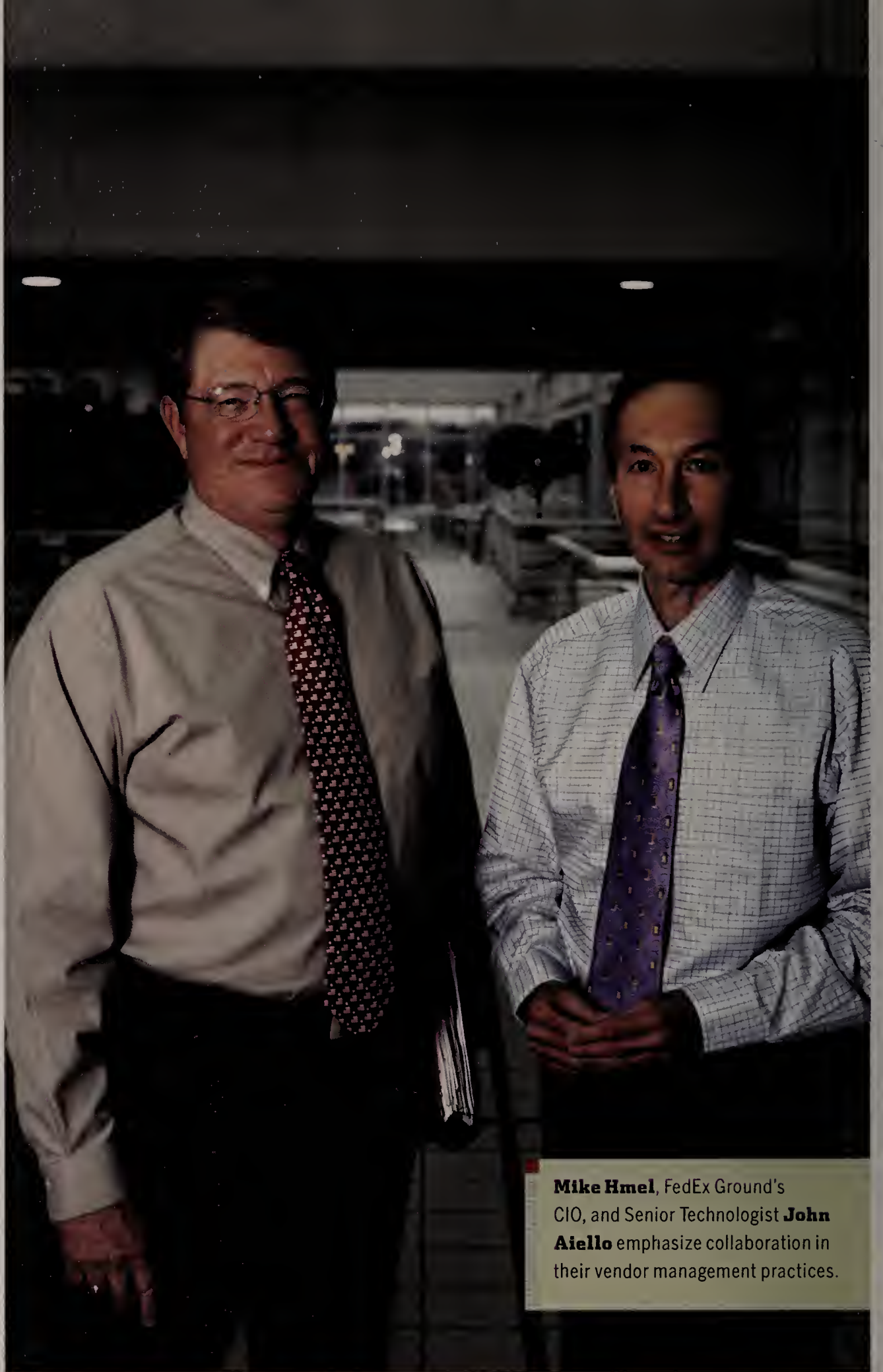
But the experience of struggling to deploy new, complicated technology made Hmel realize that he needed to maintain more constructive relationships—partnerships, really—with his most important technology providers if he was going to get the help he needed to deploy such expensive, mission-critical applications in

this brave new world of open systems and Internet-based computing.

"We were getting into much bigger [IT] projects [at the time] with more impact on the company. We couldn't afford failures," says Hmel.

His epiphany led him to rethink his methods for working effectively with vendors. Over the next four years, he and

Senior Technologist John Aiello established a series of best practices that includes channeling all vendor communications through a single group within IT; dividing vendors into different categories according to strategic importance; and meeting with vendors regularly to fill them in on FedEx Ground's financials, business goals and strategic initiatives. (For a full list of best



Mike Hmel, FedEx Ground's CIO, and Senior Technologist **John Aiello** emphasize collaboration in their vendor management practices.

Ohhhhhh.

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practices for vendor management, see "Eight Tips for Working Effectively with Vendors," this page.)

Technology analysts laud FedEx Ground for its unique approach to vendor management, which hinges on collaboration instead of sweating vendors for every last nickel. CIOs, they say, would do well to appropriate these practices for vendor relations.

Innovation Through Smart Sourcing

In the past, the goal of vendor management programs was to get the best prices from hardware, software and services companies. Although competitive pricing remains an objective of vendor management, it's no longer the primary one. In today's growth-obsessed business climate, constructive relationships with technology providers often prove to be a source of innovation. Dennis Gaughan, a research director with AMR Research, says maintaining healthy relationships with technology providers helps CIOs improve the service they provide to their end-users and the services their companies provide to their customers.

"It gives them an opportunity to leverage their vendors' skills and capabilities," he says. Companies now spend so much on technology, which is such a significant source of competitive advantage, that managing vendor relationships ought to be treated as a strategic activity and not a tactical or administrative one.

Hmel certainly views vendor management as a strategic activity, given the \$280 million his company spends on technology each year. "It's a way to make FedEx Ground more successful," he says.

Indeed, the care and feeding of 30 technology providers has made his company more agile and his IT group more innovative. For example, with the help of EMC, Hmel's IT department put in place disaster recovery capabilities in a matter of months. "It has really, really helped us get things done faster," he says of vendor partnerships.

Vendor management is so important

8 TIPS For Working Effectively With Vendors

- 1 CHANNEL** vendors through a strategy management office or vendor management office so they don't flood staff with information, invitations and questions.
- 2 DIVIDE** vendors into categories according to level of strategic importance to help determine how much time to devote to each relationship. Meet with first- and second-tier vendors regularly.
- 3 ASSIGN** managers to steward relationships with third-tier vendors to keep those relationships alive.
- 4 SHARE** as much information about your strategy, business model, processes, goals and technology projects as you can with your most important vendors.
- 5 CELEBRATE** successes together with dinners or lunches to reinforce the idea that your business relationship is a partnership. Alternate who pays for them.
- 6 GIVE** vendors access to your facility. This shows trust.
- 7 RECOGNIZE** vendors for jobs well done with formal annual supplier quality awards.
- 8 VISIT** your most strategic vendors' facilities regularly to check out their bleeding-edge technologies. —M.L.

Now that we're in bed with them, they're our partners."

Hmel and Aiello facilitate collaboration with their strategic business partners in a number of ways. These include celebrating successes together and honoring the technology companies that provide the best service with a supplier quality awards luncheon. In addition to meeting with them regularly, they also give vendors physical access to the IT department during projects.

FedEx Ground's vendor management practices are "absolutely worth emulating," says Julie Giera, a vice president who covers vendor management for Forrester Research. She says FedEx Ground is unique in combining so many best practices into a cohesive vendor management strategy; most companies use only one or two of these tactics.

"The return FedEx gets by having such a comprehensive vendor management program will pay off in so many ways," adds Giera. "It's not just that they'll get a good deal, which they will, but the vendor's commitment to FedEx will be much higher. They'll involve FedEx in R&D, and FedEx will have influence over what features and functions come with future releases of software and hardware."

Getting to Know You

Meetings like the one with Sun, which grew out of confrontational, combative relationships, are largely a thing of the past at FedEx Ground. Hmel and his direct reports now hold bimonthly and quarterly meetings with key vendors, says Aiello. One of the goals of these sessions is to educate the vendors about FedEx Ground's business so that they have more skin in the game and can provide products and services that will help IT meet corporate objectives.

In those meetings, Hmel and his executive staff brief their partners on the company's quarterly financials, its short-term and long-term strategy, business goals

to Hmel that he uses the phrase "strategic business partnerships" to elevate the concept. "We call the people that we've invited into this inner circle our trusted business partners. They were a vendor when we first started dancing with them.



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and priorities, current and future IT initiatives, and the dynamics of the logistics business in terms of cost, revenue and margins. They also explain their business processes and how they envision technology supporting them.

"You can't just be sought out by people willing to sell you their things," says FedEx Corporate Senior VP of IT Kevin Humphries. "You have to let them know as much as you can about yourself so they can select the best they have to offer for you and not overwhelm you with a full Chinese menu of what they have to sell."

FedEx Ground lifts the corporate veil in these meetings to build trust with vendors and to demonstrate the role their products play in the company's success. Hmel used this tactic effectively to reinvigorate his company's relationship with Oracle.

When FedEx Corporate took over FedEx Ground's Oracle contract in 1999, the software provider stopped meeting with FedEx Ground's IT executives. Oracle executives didn't see any reason to meet with FedEx Ground since product payments now came from FedEx Corporate, according to Aiello. Oracle's attitude did not sit well with Hmel. He needed the vendor's support because his company relied heavily on its products to power a data warehouse and data marts. To get Oracle to devote time and personnel to FedEx Ground, Hmel needed to show Oracle execs that their products were critical to FedEx Ground's success. Through dogged persistence, he and Aiello convinced the Oracle reps to visit their facility so the reps could see their products in action. Such persistence paid off: Oracle has had a consistent presence at FedEx Ground ever since.

FedEx Ground's candor encourages its vendors to share their own financials and business and technology strategies with the company. Hmel says he could not have gotten his vendors to be so frank about their strategies and finances without his company taking the first step.

Those regular meetings at FedEx Ground's office in Pittsburgh spawned the Executive Technology Briefings, designed to tie the company more closely to its technology partners. During the briefings, which usually take place at the vendor's facility, the vendor gets to showcase bleeding-edge

technologies and offer a peek into its three-to five-year strategy.

Although vendors are treated with trust and respect, they don't enjoy unfettered access. Vendors can work through a six-person strategy management office (SMO) led by Aiello or with IT VPs and directors; however, the SMO manages the whole process so that vendors don't inundate the IT group with phone calls, e-mails, event invitations and sales pitches.

Divide and Conquer

Analysts say one of FedEx Ground's smartest moves is to group its technology providers by strategic importance. It's an idea also practiced by FedEx Corporate, which separates about 1,000 IT vendors into three categories: most strategic partners, base business partners and emerging business partners, according to Humphries. "Technology is such an important part of our spend, and we do business with such a



large number of technology providers, that we have to have a methodical way of dealing with them," he says.

FedEx Ground's categories are slightly different from its parent. FedEx Ground has a group of what it calls "trusted partners," three key vendors (IBM, Hewlett-Packard and Oracle/PeopleSoft) that play the biggest role in helping IT execute its strategic technology plan. Hmel and his executive staff meet with them every other

month. Another group of "important providers" include AT&T, Business Objects and EMC. Hmel meets with this group quarterly. He assigns one of his managing directors to maintain relationships with vendors in a third group of "occasional partners," which include Accenture and Sun. The managing directors meet with these vendors once or twice a year.

"We deal with so many vendors that we can't give them all equal time," says

Hmel. By dividing vendors into different groups, he can identify how much time to devote to each one and ensure that trusted partners get a fixed amount of his time every other month.

"Not all vendors are equal," notes Forrester's Giera. She adds that many companies make the mistake of thinking the vendors with which they spend the most money are their most important technology providers. Instead, she suggests companies evaluate a vendor's importance according to the following criteria: the extent to which its products or services are used; a company's level of dependence on the vendor's technology; whether similar products or services can be obtained from other vendors; whether a product or service provides a competitive advantage; and finally, how much a company spends with a vendor.

"By developing a schema like that, you can categorize your vendors into tier one, two and three," she says.

The Ties That Bind

The time and effort Hmel put into creating a vendor management program has paid off. When he needs their help, vendors jump because they work so closely with FedEx Ground and understand the impact of technology on its business.

For example, when a competitor to one of FedEx Ground's specialty businesses, SmartPost (which specializes in shipping high volumes of low-weight packages), went out of business, SmartPost's business spiked overnight. SmartPost's IT infrastructure couldn't handle the dramatic increase in transaction volume. Hmel called HP and told his account representative that he needed additional hardware ASAP. HP delivered the goods the very next day. "Speed is key to us," says Hmel.

HP moved so quickly for two reasons: It understood FedEx Ground's business and the technology its customer uses. In fact, HP had just had one of its regular meetings with FedEx Ground. During that meeting, one of Hmel's managing directors discussed the company's recent acquisition of SmartPost and the integration challenges it could face because SmartPost's technology differed from FedEx Ground's. So HP was already aware of FedEx Ground's potential

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“We’re a growing company, and there’s a ton of stuff to get done. By finding partners that move at the speed we do and working with them, **I can deliver value to the business.**”

—Mike Hmel, CIO, FedEx Ground

technology needs. “The day FedEx Ground announced publicly that they had acquired this company, we started learning about it,” says Gerard Katilius, HP enterprise account manager.

HP has a consistent presence at FedEx Ground’s headquarters, so the vendor knows what equipment its customer needs and how to configure it. “When Mike called up and said, ‘We need servers,’ we knew exactly what to give them,” says Katilius because FedEx Ground has worked closely with HP to ensure that new equipment fits its IT standards. “I have support engineers who know the FedEx environment. When they go into the data center, they know where the [HP] rack is and they know exactly what network connector and what power connector to use to plug in computers,” he adds.

HP came through for FedEx Ground because the vendor trusts its customer. “They knew we were going to pay them,” says Aiello. And FedEx Ground’s IT department doesn’t cry wolf unless it really needs help, says Hmel.

The goodwill between FedEx Ground and its trusted partners allows vendors to expedite some of their processes when problems requiring immediate attention crop up. “I can pick up the phone and tell one of my strategic business partners ‘I need someone for X amount of time.’ They give me a rough dollar amount of what it will cost to have that extra person and we agree without having to sign a paper,” says Hmel. “We can prepare contracts and agreements that are open-ended without lawyers on top of us at every step.” Not having to barter over contract negotiations saves days or weeks for Hmel.

Forging close ties with vendors gives FedEx Ground access to innovative new technologies that save the IT group time and the company money. For example, FedEx Ground needed to implement disaster recovery capabilities at FedEx Corporate’s Memphis data center. In the event that the TMS in FedEx Ground’s Pittsburgh data center went down, the company could bring up the same functionality in Memphis within one to two hours. It was shaping up to be an enormous project that the IT department thought it had no choice but to do on its own. EMC got wind of the plan when FedEx Ground started purchasing storage from it to use in the Pittsburgh data center. Instead of just selling the storage, EMC showed FedEx Ground packaged solutions that could help speed the project. It was just what FedEx Ground needed.

“We grabbed it and implemented it in eight months,” says Hmel. He estimates it would have taken FedEx Ground twice as long to plan the architecture, develop the software in-house and make sure the data in Pittsburgh was in sync with the data in Memphis. Instead, it “turned out to be a no-brainer” because EMC understood what

it was striving for. Hmel adds that FedEx Ground probably saved \$500,000 by purchasing packaged solutions.

A More Perfect Union

FedEx Ground’s strong vendor relationships help it innovate and stay on the cutting edge of technologies that drive revenue for the company. At the same time, its technology partners have come to appreciate the processes that keep them connected to the business.

“FedEx has one of the best attitudes and processes in place for governing and maintaining strong vendor relationships,” says HP’s Katilius. “They’ve allowed me to visit their facilities and participate in their business. I can load and unload vans. I’ve been at their ‘sortation sites.’ I understand their business so that I can quickly recommend the right solutions that will make them more flexible.”

Speed and flexibility are precisely what Hmel wants from his partners. He says it’s hard to quantify FedEx Ground’s overall financial gain from focusing so much attention on vendor management. What the company has earned, Hmel says, is agility and a reputation throughout FedEx for meeting milestones on mission-critical IT projects.

“We’re a growing company, and there’s a ton of stuff to get done. By finding partners that move at the speed we do and working with them, I can deliver value to the business,” he says. **CIO**

More on Vendor Management

Read about how FedEx Corporate manages technology providers in “Getting Vendors to Deliver,” at www.cio.com/120106. To participate in a vendor management discussion, check out CIO’s Tech LinkLetter blog. In the post “**LIES YOUR VENDOR TOLD YOU**” at blogs.cio.com/node/325, readers share the tall tales vendors have fed them. In a follow-up post, see readers’ tips for making vendors tell the truth at blogs.cio.com/node/347.

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Planning Takes Planning

In the first half of 2006, strategic planning was the subject of more peer-to-peer consultations among the 428 members of the CIO Executive Council than any other topic except governance. On its face, a strategic plan is a simple thing: a document that enables the enterprise to see what projects are planned and what goals the IT department has set to support business objectives. But creating one can be a long and arduous process, and it can't be done in a vacuum; business input is essential. Members of the CIO Executive Council offer tips on how to make strategic planning pay off.



Jackie Barretta

Identify Owners

The short answer to the question of who owns IT strategy is "Everyone." But if everyone's goals were included in the plan, it would quickly become unwieldy. Jackie Barretta, CIO at Con-Way, works with her 15-member enterprise architecture group to identify IT strategies at a broad level, but the IT strategy is set at a more detailed

level by the three individual business units. This was a no-brainer as the EA group's mission is to work with the business and stay up to speed on emerging technologies.

At Cardinal Health, a dedicated pair of individuals oversee the strategic planning process in IT. They then recruit other participants depending on what they're working on and depending on what stage the plan is in. "For example," says Tom Perrine, senior VP in IT who manages Cardinal's strategic planning process, "a larger team might work for a few months on a set of strategies and during this process

give 50 percent to 80 percent of its time to strategic planning. When it's finished, the people go back to their everyday responsibilities and my strategic planning team recruits a different group."



David Wagner

Get Business Input

Workgroups and planning sessions are good venues to elicit your business colleagues' input for the IT strategic plan. Ironically, the business folk often want to talk about technology in these meetings, but CIOs should discourage that. According to CIO David Wagner of ON Semi-

conductor, "I try to get the business side focused on what outcome they're trying to achieve so we can spend our energy thinking about possible solutions. I don't need to hear about a new technology system they just read about."

The same thing happens at Con-Way. "It's natural for the business to get excited about what they want to see in a system," says Barretta. But in her two-day planning sessions with each business area, she encourages the businesspeople to focus on where Con-Way is heading and how IT can be a partner in that effort. To keep things moving, Barretta's six-person facilitator team has been trained to lead strategic planning sessions. Each facilitator has a deep knowledge of a particular part of the business and is schooled in the right types of questions to ask.

Participate in the Business Plan

In many companies, an IT strategic plan is not the company's only road map. There may be a separate business plan from which IT takes its cues.

Continued on Page 92

[ONE :: LINER]

"Everyone thinks strategic planning is a pipe-smoking job where people think big thoughts and nothing really happens. The hard part is getting people to think that **strategic planning is real enough** to be possible."

-TOM PERRINE, SENIOR VICE PRESIDENT IN I.T., CARDINAL HEALTH



IT Measures Up To SLAs

CIOs Say SLAs Build a Solid Business Case for Outsourcing IT Services

When IDG Research queried *CIO Magazine* subscribers regarding their use of SLAs to measure IT service delivery, it wasn't particularly surprising to learn that nearly 73 percent of respondents are on board.

Although this aptly reflects IT's ever-increasing impact on the bottom line, what's really interesting is the effect this trend is having on outsourcing. CIOs are successfully applying those internally developed metrics to third-party agreements, making outsourcing a much more attractive option for delivering key IT services – including data protection.

THE SKINNY ON SLAs

A SLA (or Service Level Agreement) is essentially a binding contract between the IT organization and a business unit that specifies the services involved, the metrics by which to measure and the cost of the services. "It's a perfect way to hold IT accountable for their

services," explains Geoff Nesnow, Iron Mountain's program manager for Data Protection, "like any other business unit would be."

Nearly seven of 10 respondents whose companies use them indicate that SLAs are an effective tool for measuring their IT organization's quality of service. By setting a benchmark with specific metrics, SLAs quantify the achievement of service levels against business objectives – which is a huge change for IT. Examples of SLA metrics include recovery time objectives, system availability, maintenance windows and more.

"Effective SLAs contribute to the bottom line," says Nesnow. They enable enterprises to budget and prioritize IT services. They even provide a framework for billbacks, rather than being divided equally among units, like HR services. And increasingly, IT professionals are paid based on their ability to meet SLA objectives.

OUTSOURCING GOES MAINSTREAM

Another benefit that became evident as a result of the study: SLAs make it easier to establish a quantifiable outsourcing agreement. Outsourcing has always been a tough sell, mainly because it's been difficult to put hard dollars against the cost and the return of a service agreement. Now, internally established metrics can

be pushed into third-party agreements, making any outsourcing contract less risky. So it's easier for IT to take advantage of providers that offer services that are better, faster or cheaper, says Nesnow.

The use of SLAs is helping to build a case for outsourcing IT services that wouldn't normally be viewed as a "software as a service" option. One telling statistic: a resounding 51% of respondents see outsourcing as a viable option for data protection services. The technology is absolutely critical to any business, but at the same time it's not a core competency of most IT organizations. So, by holding providers accountable to specific metrics, data protection – such as remote office and PC backups – is now seen as a viable candidate for outsourcing. "Let others whose core competency it is handle the important applications like data protection," adds Nesnow.

It seems it's high time that CIOs reevaluate their stance on outsourcing.

73% of respondents use SLAs to measure IT service.



Go to www.cio.com/whitepapers.im now...

to obtain a free download of *IT Measures Up to SLAs*. This whitepaper outlines the results of IDG Research Services' survey of CIOs regarding how SLAs are making outsourcing a more attractive option for delivering IT services.



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Planning Takes Planning

Continued from Page 90

In some companies, the CIO is an active participant in building that plan, the better to ensure alignment and an integral role for IT in achieving the business's ambitions.

As one of the CFO's direct reports, Jody Davids, executive VP and CIO, brings IT into the overall business strategic plan at Cardinal Health. The high-level business strategic planning is done by the executive team, thereby creating a coordinated and aligned enterprise-level plan. As Davids' colleague Perrine puts it, "In some ways, the whole planning process is *not* really about the final document you create, but about the mental alignment you build in your leadership team by working together."

Eastern Mountain Sports (EMS) CIO Jeff Neville heads up the IT *and* enterprisewide strategic planning. "I partner with the VP of HR to meet with each of the VPs at EMS. We aren't just working on the strategy for technology, but also on required skills and staffing resources," says Neville.

Unfortunately, all too often the business lacks a clearly articulated strategic plan, leaving CIOs with the task of cajoling some sort of direction from the business leadership. This is frequently the situation in entrepreneurial cultures. Eugene Nizker, former CIO of Custom House Global Foreign Exchange, developed a set of questions designed to encourage the business to define growth, products and services, mergers



Jeff Neville

and acquisitions, and channel strategies. (For Nizker's queries, see the online version of this article at www.cio.com/120106.)

Communicate

For many CIOs, the strategic plan is typically communicated at a town hall meeting or posted on the intranet. Neville is experimenting with using an intranet wiki. "I want to engage people in thinking about how we'll accomplish the plan and feel like it's a decision that we've all had a part in making," he says.

An important element in effective communication is consistency. Wagner, for instance, has displayed a one-page strategy graphic at every board meeting he's attended since 2002.

"Before I got here, we were operating more by a strategy of the moment," he says. Today, Wagner reinforces a consistent and clear picture of what IT wants to do to provide bottom-line value to the organization. Says Wagner: "You have to be focused on the bulls-eye of your strategic plan: Are we creating value for the company?" **CIO**

Carrie Mathews is a senior program manager at the CIO Executive Council. To comment on this article, go to the online version at www.cio.com/120106.

Diagrams for Success

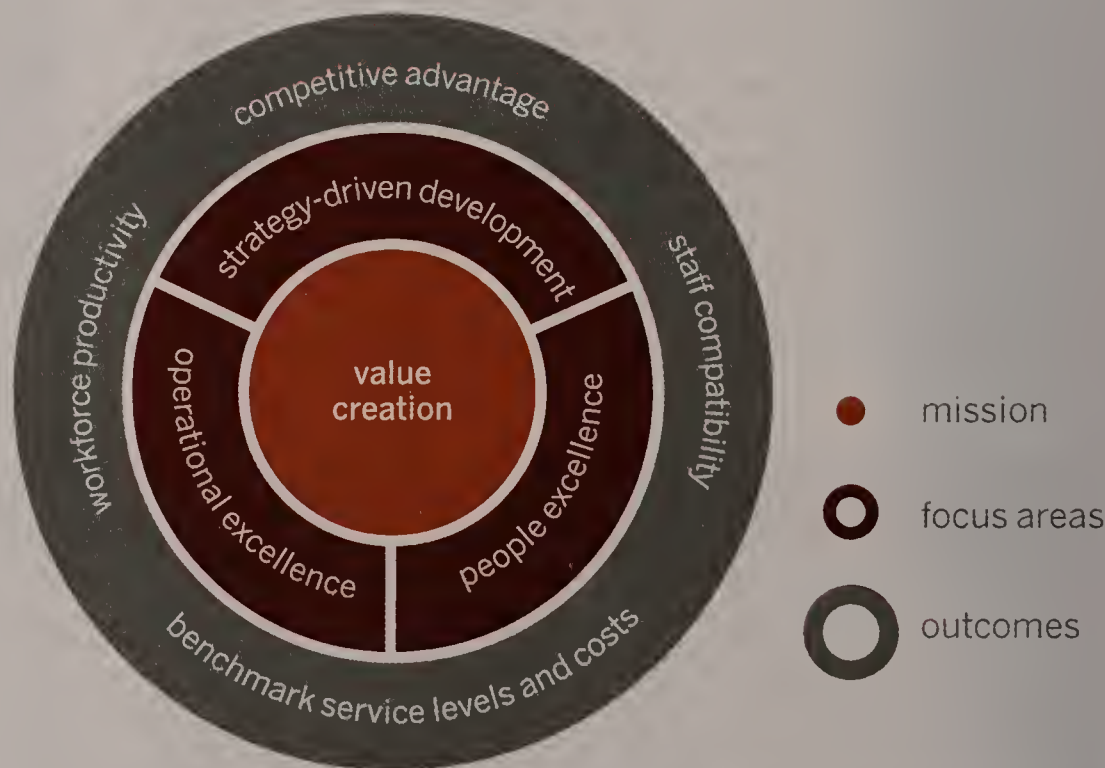
A picture is worth a thousand headaches

ON Semiconductor CIO David Wagner uses concentric circles to outline the three different ways that his IT staff focuses on creating value for the company. The action moves from the center (the mission to create value) to the outside—outcomes such as competitive advantage.

For other strategic diagrams, go to the online version of this article at www.cio.com/120106.

—C.M.

Strategy Summary



The CIO Executive Council is a professional organization for CIOs founded by CIO's publisher. To learn more about the Council, visit www.cioexecutivecouncil.com or contact Vice President of Development Dexter Siglin at dsiglin@cio.com or 508 935-4493.

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Editorial, Advertising and

Business Offices: CXO Media
Inc., 492 Old Connecticut Path,
P.O. Box 9208, Framingham, MA
01701-9208, 508 872-0080.

CIO (ISSN 0894-9301) is published semimonthly and as a combined issue Dec. 15/Jan. 1 by CXO Media Inc. Periodicals postage paid at Framingham, MA, and at additional mailing offices. Canada Publications Mail Agreement Number 1902075. CANADIAN POSTMASTER: Please return undeliverable copy to P.O. Box 1632, Windsor, ON N9A 7C9.

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Postmaster: Send change of address to CIO, P.O. Box 489, Northbrook, IL 60065-9816. Printed in the U.S.A.

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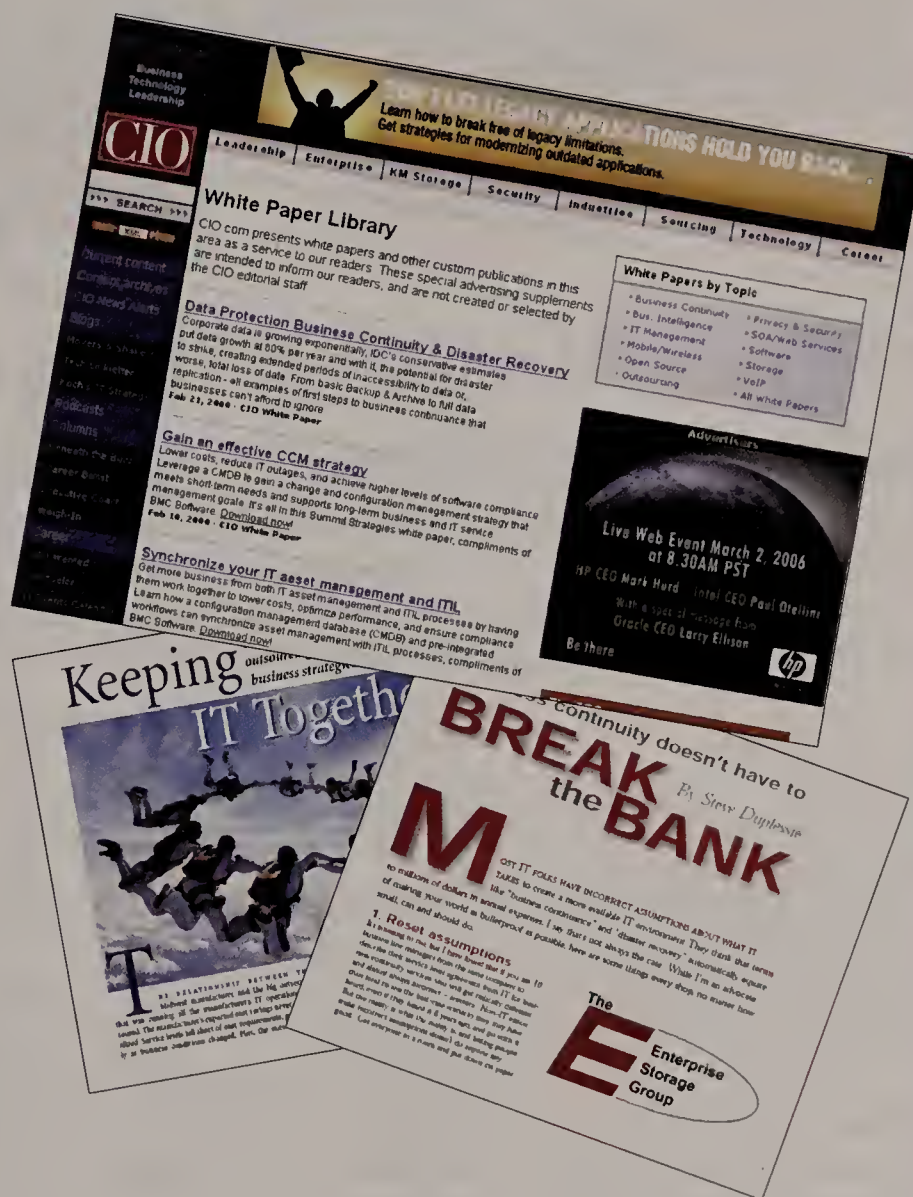
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Business
Technology
Leadership

endlines

BY SCOTT KIRSNER

A CONEY ISLAND OF YOUR MIND



Remembering IT Land

Why didn't a theme park of IT amusements survive? Beats us.

Many theories surround the closing last month of **IT Land**, the Kissimmee, Fla., theme park that opened in October. Maybe it was the hours: open 24 hours a day, seven days a week. Or maybe the attractions just weren't enough fun to lure vacationing CIOs and their families. Whatever. Last week the derelict property was sold to a time-share developer.

» The CIO/Vendor

Ferris Wheel

Each CIO shares a car with a vendor; per-seat licensing prices rise steadily until the CIO threatens to jump into another car, at which point prices begin going down.

» Whack-a-Bug

Use your rusty coding skills to eliminate errors from a piece of just-released software. The prize: You get to keep your job.

» Mr. Gates' Wild Ride

Scramble to patch Microsoft security holes before hackers can take advantage of them.

» Concession Stand

Burritos, pizza, Mountain Dew and Red Bull.

» Live Dinner Show

Hour-long song-and-dance in which programmers explain why their project is six months late, doesn't meet half the requirements and has no documentation. Jaw-dropping tap dancing!

» The Project Management Railroad

Wonderfully slow. Frequent, unexplained stops. Try to avoid being hijacked by business unit heads with different priorities.

» The LAN Log Flume

Try not to lose your lunch as the network goes down—then up—then down—then up. You end up all wet.

» Parachute Drop

Drop in to a far-flung branch office, solve all their problems in 48 hours, catch the red-eye home. Collapse.

» Pirates of the Pacific Rim

Visit the Beijing branch office and try to explain to employees why it's not OK to buy all their software at Ye Olde Bootleg Bazaar.

» The Haunted Data Center

Mainframes crash for no reason! Backup tapes vanish inexplicably! Specters of past CIOs and their bad decisions appear and linger! There is...no...way...out.

» Budget Bumper Cars

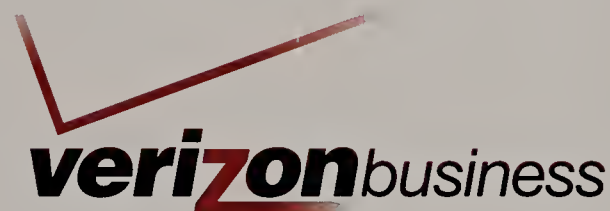
Either you wind up with neck pain or your CFO does.

» The Next New, New Thing Souvenir Shoppe

Baseball caps, golf shirts, fleece vests and tote bags emblazoned with the logos of hardware, software and service providers. Everything XXL.



keys to successful managed networks.

by 

WHY MANAGED NETWORKS?

The simple answer is that every business can use a little help—especially with the day-to-day management of a complex, ever-changing network. Expert network assistance can mitigate the financial risk of downtime, create cost efficiencies, reduce the strain on your IT department and free up more time for you to stay on top of new technologies.

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you see the value that it brings to your business, explore your comfort zone with other managed areas.

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COMPARE THE SLAs.

A strong management partnership begins with an industry-leading Service Level Agreement. Look for a provider that offers a high level of operational performance, from installation to availability, to time to repair, and proactive notification

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